

ALCHEMY

AN ILLUSTRATED A TO Z

DIANA FERNANDO

ALCHEMY

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In these last years of the twentieth century, there has been a revival of interest in the genre that is Alchemy and its mixture of ancient wisdom and novel experimentation. Neither a science nor a philosophy, Alchemy has been the subject of controversy and fascination for centuries.

Containing over 500 entries, this comprehensive new illustrated dictionary is a veritable Pandora's box of information, written with an earthy sense of humour, but always retaining the exuberance of the early practitioners of the art. As a practising alchemist and linguist, Diana Fernando has been able to return to original sources and re-interpret their meanings. In particular, she has drawn on many Arabic and Kabbalistic manuscripts to provide an original viewpoint.

The strong and important visual aspect of Alchemy is maintained by the author's skilful artistry in over 160 illustrations created especially for this book, taking her inspiration from the great symbols and emblems of every aspect of the alchemical phenomenon.

Like the symbol of Mercury itself, Alchemy is ever moving and ever changing and has much of relevance to tell us today. In this entertaining and deeply satisfying book, the entries cover everything from laboratory experiment to the exploration of the soul.

Cover picture:

The Emerald Tablet (Images Colour Library).

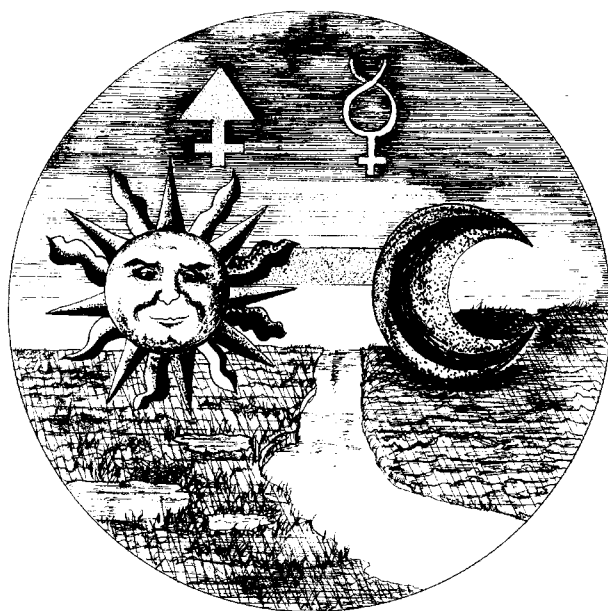
The alchemical microcosm within the macrocosm. Amidst His cherubim, God (Jahveh, יהוה) presides over the firmament with the Lamb of Christ (on His right) and Dove of Peace (on His left). The glyph for mercury in the central triangle is encompassed by rings: one each for alchemical salt, sulphur, mercury, the sun and stars, and the zodiac. Below the rings is the hemisphere of alchemical winged creatures, while on the earth below is the animate representation of the Great Work.

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An Illustrated A to Z

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Diana Fernando



BLANDFORD

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A BLANDFORD BOOK

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To Professor R.J.W. Evans
of Brasenose College, Oxford,
whose work on Rudolph II has been a
constant source of inspiration

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Acknowledgments

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Without the resolute support of Carolyn Whitaker this dictionary would not have materialized at all. Carolyn, keeper of my sanity, has seen the book alchemize from start to finish over eight years. Her equanimity, resourcefulness and tact have kept me going, while her curblings on my enthusiasm for words such as codswallop, kerfuffle and skedaddle have been exemplary.

Finally, my long-suffering family and friends deserve the highest praise for humouring me throughout, notably Fiona Sandilands, Barbara Nicholls and my two children, Sonali and Giles.

Diana Fernando, London 1997

Introduction

If I had written this dictionary 50 years ago I could have been killed for being a witch, for the Witchcraft Act that carried the death penalty was repealed only in 1951. Through the ages, alchemy – closely associated with witchcraft – has been hounded, misunderstood or, at the very least, sniggered at. We think of Reginald Scott's accounts of witch trials, Giordano Bruno at the stake, papal bulls for the extermination of sorcerers, Jews and all, as creatures of a dark past. Yet alchemists have evoked such responses well into the twentieth century. As the outsider of classifiable subjects, neither a science nor a philosophy, alchemy is still not quite acceptable in the groves of *Academus*. It is an esoteric way, like Tao. Its very elusiveness as a serious inquiry into the nature of life is what attracts me. Curiously, like the Tao of Physics or even the Tao of Pooh, it is coming back into fashion. Though science may be suspicious of this 'alchemy', paradoxically the two are converging once more. Particle physics and quantum mechanics pose the selfsame questions as the Presocratic Greeks or Plato in his *Timaeus*: how does life tick? what is chaos, what is form? The world of probability again replaces the world of certainty.

This dictionary is not a substitute for others; rather, it is a supplement, intended to put some sort of order on an orderless mass of supernal size; to catalogue without being categorical; and to edify with a certain lightness. Alchemy is about transforming materials, but it incorporates unknowns, unpredictables. It is more about creative cookery than chemistry; or

closer still, it is like wine-making in that wine from the same vineyard, the same grape, is subtly different from bottle to bottle and year to year, for it interacts at every stage in its making with the sun, winds, rain, seasons, soil and contours of the land. So it is with alchemy. We are in the realm of indefinables. What is the alchemical Stone? The ones I have seen are distinctly rubbery. What and who are these oddities that parade across my pages through place and time; what is *prima materia*? What is the 'dew' that acts upon the Sulphur and Mercury in the making of the Stone, that is as real as the modern alchemist Barbault shows us but that cannot be pharmaceutically analysed? I can give no exact answers. I follow the alchemists' tradition of capitalizing letters to denote otherness of meaning (cabalistically loaded, loded or leaded) where words cannot reach. Even so, in occult chemistry substances have atomic weights plus an extra quality that is not scientifically measurable. Analogously, in modern quantum physics, quarks exist, but, like Schrödinger's cat, they have no size.

The foundations of my alchemical quest were a classical education with strongly humanist overtones (culminating in Hamlet's 'What a piece of work is a man! ... And yet, to me, what is this quintessence of dust?') followed by long years of Work in esoteric schools, conversing with seers and alchemists from many lands. Add to that a satirical edge to my nature that sees the Rabelaisian dunghill at the bottom of every golden Renaissance stairway, and my dictionary



was begun. I am an inveterate snapper-up of unconsidered trifles, perhaps, like Autolycus, littered under Mercury the patron saint of alchemists as well as sneak-thieves. When I discovered Paracelsus' Creed, 'I am different, let this not upset you,' there was no turning back. I was born on his birth date, just as I was born on the death date of my other great hero, Jalal al-Din Rumi. Poring over books in many a monastic library, I absorbed all I could of the pillars of alchemy: Zosimos, Paracelsus, Rhazes, Moses de Leon, Maimonides – and the books they used: the *Zohar*, *Pimander*, *Picatrix* – and the outstanding patrons: Caliph Al Ma'amun of Baghdad, Frederick II of Sicily, Alfonso X of Castille and Rudolph II of Bohemia. Dignitaries or sick desperadoes, they all had a vested interest in fostering the occult sciences.

It dawned on me that this vast agglomeration of strivings that is alchemy could not be sustained by individuals alone. Just as tradesmen had their guilds and scientists their Royal Society, alchemy too must surely have needed frameworks for protection and motivation. Behind the surface of Renaissance politics and orthodox religion were signs of secret brotherhoods. A fleuron here, a pair of compasses there, were indications of networks of Rosicrucians, Freemasons, Familists and printing fraternities who backed alchemists and disseminated their work, continuing the traditions from antiquity of the Pythagoreans, Therapeutics, Gnostics, Kabbalists and Brethren of Purity. But there was never one single School of Alchemy in the sense of a monastic school. There were, however, faculties where alchemy was studied at university, notably Krakow.

Such was the nature of alchemy that it was, like its symbol Mercury, movable and always travelling. So were its adherents – working amidst others, catalysing, often of no fixed abode but moving from one place to another and one principle to another like the hermaphrodite. I began to see alchemy as a spiritual silk road with staging-posts at intervals through time and space: the pyramids, Stonehenge, Gothic cathedrals, libraries and certain cities. During the Dark Ages the esoteric alchemical life was a quiet undercurrent to the Vandals and crusades, the sackings and burnings and destruction of books. Alchemy transmitted some great intangible truth: 'As above, so below' according to the *Emerald Tablet*, demonstrating that the microcosmos of man's life is paralleled in the life of the universe. The transmitters of alchemy were the unsung heroes of history: the Presocratics, the Pythagoreans, the Sabians, Copts and Syriac Nestorians. They were unsung because they vowed secrecy. Ill fate has often befallen alchemists who betrayed powerful secrets. In modern times one remembers Fulcanelli and his crew, who had the alchemical magistry of nuclear fission.

In systematizing this dictionary, I have tried to balance entries on the laboratory Operations and well-known alchemists with entries on the framework that made alchemy possible: the brotherhoods, the sacred places, the transmitters, collectors and patrons, the texts and publishers, and something of the language, including cabalistic and glyphic. Most essentially, I have laid significant emphasis on pictures and emblems, which are keys to much of what I did not understand. Years of meditative self-discipline has given me



Introduction

enormous respect for the subject matter I have re-traced with my pen, largely from old manuscript facsimiles. I find it humbling and uplifting – not to say exacting – to re-trace the hand of Dee or Newton. It is an alchemical process in itself. The forms are theirs – the alchemists and their engravers – but I have made them mine. In the ordinary run of things, to copy another's line or shape is what *not* to do. But in alchemy, the re-creating of a form is like a mandala or prayer. My colour plates included in the book can also be looked on as alchemical in make-up. The process is akin to Turkish chamoletting, which Francis Bacon describes in his *Sylva Sylvarum* of 1627. I float the pigments (earth) on various liquids (water), submit them to spirits and acids (fire), which interact with the atmosphere (air) and the painting surfaces (wood or metal). These surfaces are laid out in the sun for a day and in shade for a

fortnight before being 'mined' with knife or stilus.

Finally, my subject demands a sense of humour. As Scott Buchanan remarked in *The Portable Plato*. 'Scholars have never been able to view philosophy with anything but a long pedantic face.' Such pedantry as weighs down the saturnine allegories of alchemy, such yearnings for elixirs, such potterings with semen and dung, such anxiety for secrecy and such gibberish resultant therefrom – all these call for a touch of Jove, of airy levity. It has ever been my intent to save alchemy from gibberish (most fitting alchemical word, now sadly debased, from Geber the respected collective) and to give it a lightsome respectability in the face of the new physics.

Diana Fernando
London 1997



Alchemy

To define alchemy without being irreverent or pompous is well nigh impossible, but this dictionary is an attempt to do so. Alchemy is one of the four esoteric paths to enlightenment, along with Magic, astrology and Kabbalah, enacted on two precisely corresponding levels:

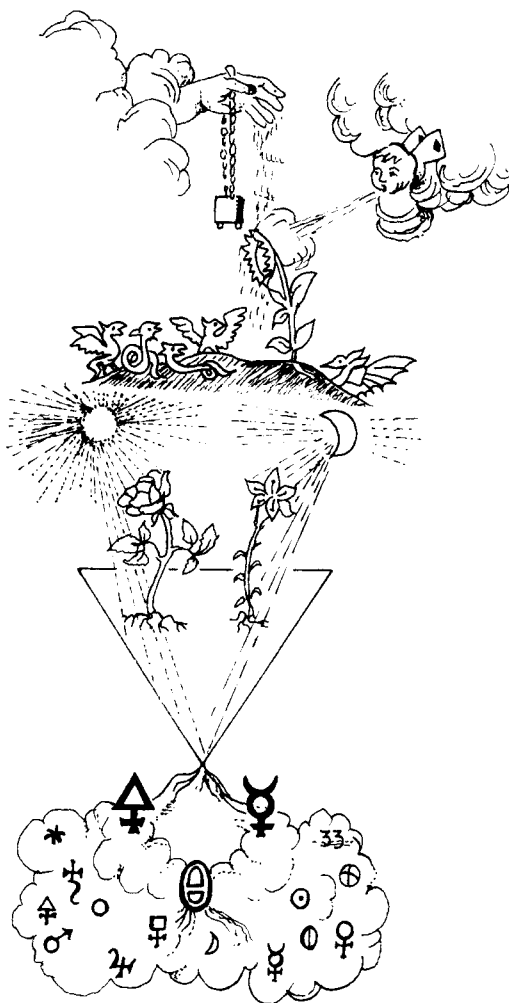
- 1 physical – the transformation and purifying of metals;
- 2 metaphysical – the transformation and purifying of men.

Alchemy leads to perfection on all planes, by the separating and 'death' of the body, followed by a rejoining of the purified parts, this time in perfect proportion, via the transforming powers of earth, water, fire, air and ether, soul and spirit – i.e. evolution speeded up by man.

In the past, the path of alchemy was embarked upon both as a physical process in the laboratory and as a spiritual journey like *The Pilgrim's Progress*. At the laboratory level, the main operations were: calcination, sublimation, fusion, crystallization and distillation.

Alchemy employs gradual heat continuously and carefully, hence dung, peat and rushes were used. Chemistry employs more violent heat: it is a quicker process. Nuclear fission is a form of alchemy; it certainly blows things apart. Unfortunately for our planet, it does not put them together again.

The origins of alchemy are difficult to ascertain as there was no set code of practice. In the West, alchemy probably grew from Egyptian metallurgy and glass-making on the one hand, and the pyramid mysteries and initiation rites on the other. There is, moreover, a strong likelihood that the Jews in Egypt from



The Magnum Opus or Great Work of Alchemy. The dew and breath of heaven descend upon a flower representing first matter (*prima materia*). The solar rays pour down on a rose (the rose of Sharon), while the lunar rays touch a lily (the lily of Jehosaphat). They meet at the apex of the inverted triangle and flow forth as the Sap of the sun and moon, producing the three Philosophic Principles (which generate the elements, metals, minerals and planets): Mercury ☿, Sulphur ♀, and Salt ♂.

the time of Moses influenced visionary or spiritual alchemy through Kabbalah. The correspondences between the Egyptian theogony and the Kabbalistic sephiroth are striking. Within recorded history, nearly all the alchemical texts start with the Alexandrians of the early Christian era.

In the East, in India and China, alchemy started with medicine and meditation. There are references to alchemical processes in the *Nei Ching* (The Yellow Emperor's Book of Medicine), whose origin is lost in the dim past. However, it may well be that alchemy as an art was not practised in the East until the great concourses of oriental and Indian intellectuals at Baghdad under the Caliph Al Ma'amun (reigned 813–833) and the Arabian bearers of alchemical wisdom.



Alchemystical

Etymologically, there are various confused theories as to the origins of 'alchemy'. Its fabled Egyptian origin is through the Arabic 'el kimya', from the Egyptian 'keme', black earth – i.e. the life-giving soil of the Nile inundations. According to the Alexandrian alchemists, 'keme' was the original matter to which all metals must be reduced before they turned to gold. According to the French archaeologist Jacques-Joseph Champollion, 'keme' is a transliteration of 'Chemi', Egypt, a name the Hebrews translated as 'Land of Cham'.

'Chema' is the title of a basic work cited by the fourth-century Greek alchemist Zosimos. Another source may be 'Alchymy', an older word than 'alchemy', which is derived from the Greek word meaning 'casting, commingling', as found in Greek alchemical texts of practical recipes for the Tincture and the Philosopher's Stone or for ultimate Essence of a thing. These texts, which are found mostly among the third- and fourth-century Gnostic literature, reveal a mystical nostalgia for salvation.

That alchemy was abolished from Egypt in AD292 under the decree of Diocletian is significant. It was a potent threat: 'These alchemists all speak of something other than just the laboratory level.'

Alchemystical

Meaning 'alchemical', this adjective was used by the modern alchemist Frater Albertus, implying its connection with 'mystes' or initiates, as in the Greek Eleusinian mysteries.

Alchimistisches Medaillon

An oval medal, 40 x 37cm (15³/₄ x 14¹/₂in), weighing 7kg (31b), now in the Kunsthistorisches Museum in Vienna. The upper third of this medal is silver, while the lower two-thirds are solid gold, allegedly transmuted in 1677 by the ex-Augustinian monk Wenzel Seiler, and his patron, alchemy-mad Emperor Leopold I of Germany.

Alcohol

A term shifted by Paracelsus at his own whim from 'black eye paint' (Arabic 'al-kohl') to 'spirit of wine', where it has stuck from that day to this. When set alight, this 'fire water' means 'union of above and below'; fire ascends, water descends. See also Emerald Tablet.

Alembic

From the Arabic 'al-ambiq', still or still-head. Just as calcination gave rise to much diversity of furnace, so distillation did for a parallel array of stills, which usually consisted of a flask to contain the liquid to be distilled and a still-head with a delivery spout. Zosimos prescribes that the still-head should fit closely on to the earthenware vessel containing the matter to be distilled and the joint should be luted with flour-paste.

Later, special lutings were highly recommended; made from stone-free clay, dried dung and chopped hair, the mixture was known as Philosopher's Clay or Clay of Wisdom. See also Zosimos.

Alfonsine tables

The most remarkable of the scientific works under King Alfonso X's patronage of Arabian learning. These tables were lists of planetary movements that formed the basis of modern scientific astronomy. They were prepared under Alfonso's direct command by two learned Jews at Toledo: Judah ben Moses Cohen, a physician, and Isaac ben Sid, a Hazan or overseer in the synagogue. The tables would have been closely consulted before astrological and alchemical Operations.

Alfonso X (1221–84)

Known as El Sabio, or The Wise, Alfonso was King of Castille (reigned 1252–84). Politically weakened by his imperial aspirations, he was

intellectually outstanding, not only for his *Book of Chess* but for his promotion of philosophy and astronomy and translations of Eastern alchemical and scientific thought into Castilian, via a number of Jewish translators, who were conversant with the Arabic texts, in the tradition of the earlier Spanish Muslim and Jewish scholars. See also Algazel; Picatrix.

Algazel (1058–1111)

A Persian Muslim philosopher from Nishapur, surnamed 'Hujjatu-I-Islam' (Islam's convincing proof), who did for Islam what Thomas Aquinas did for Christianity. His works were turned into Latin from the Arabic by the ceaseless collaboration of Avendeath, the Jew of Toledo, and Gundisalvus, who became Bishop of Toledo. Algazel's *Kimiya al-sa'ada* (Alchemy of Happiness) is typical of the spiritual alchemical texts so popular in the Middle Ages, that derived from the Neoplatonist commentaries on Plato's *Timaeus* and Aristotle's *De Anima*. See also Aristotle; Plato; Timaeus.

Algorism

Derived from Al-Khwarizmi, who drew up a set of astronomical tables for calculating the meridian of London – an unlikely place for this ninth-century Arabian alchemist from Toledo to choose!

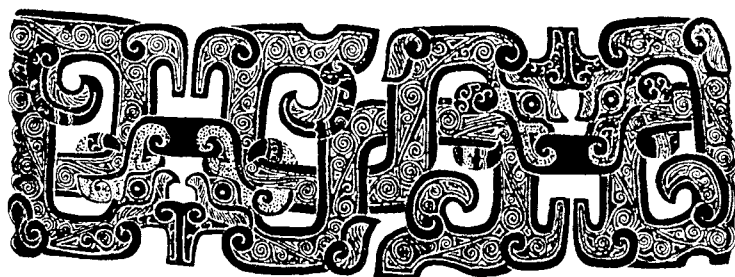
Alkahest

A paracelsan sham-Arabic coinage for 'universal solvent', the first magnetic agent.

Allegory

The essence of alchemical literature; its vast compendia teem with animated metals – lions, red and white, eagles, dogs, wolves, peacocks and dragons. For instance, a dog devoured by a wolf signifies purification of gold by antimony; Sol or Sun devoured by the green dragon

means that the gold was dissolved in *aqua regia* (royal water), and that the gold probably contained copper, which would colour the acid bluish-green.



Interlacing Chinese dragons. Chou Dynasty c. 500BC.

There are allegories about kings and queens, virgins and hermaphrodites, the Flesh of Adam, Diana the Moon-Goddess veiling and unveiling herself; there are mystical weddings and unions, winged chariots, chariots of antimony, ships, Argonauts, eggs and phoenixes – all in a hive of activity, fixing, fleeing, rising, bathing, swallowing, conjoining with or spewing one another. The reason for this obscure symbolism was a misguided devotion to the arcane and a need to put off everyone except the most devout, or daft, depending on viewpoint.

Alles Mist (all nonsense!)

A pun implied in Pieter Bruegel the Elder's pen drawing of *The Alchemist* (sixteenth century). This is not a picture of learned men practising the magical art in the interest of knowledge but of idiot peasants obsessed with the idea of instant wealth.

The laboratory is a ramshackle kitchen where the children run riot. One has a cooking pot wedged on its head so cannot see. A Fool fans the fire while undertaking his alchemical Operation of transmuting metals into coins. Only the cynical doctor at the left of the picture realizes the stupidity of it all; he sits at a desk pointing to the volume open in front of him. The title reads *Alghe-Mist*, a play on the words 'alchemist' and 'alles mist'.

Alles Mist





Aludel

Aludel

The alchemical vessel, called variously the Hermetic Vase, Vase of the Philosophy, and Philosopher's Egg in which the Great Work was consummated.

Alum

A fixative. Medea was said to have concocted alchemical dyes, into which she threw alum, together with blue vitriol and blood, making 'a lake, a mordant, clarifying the seething brew'.

Amianthos

Almost identical with asbestos and mica, according to Ruland in his *Lexicon Alchimiae* of 1612. It was the 'incombustible paper' from which were made 'everlasting books', such as those found, supposedly, in the Vault of Christian Rosencreutz, the fabled founder of the Rosicrucian Orders. A story is told of Marco Antonio Castagne, the artist, who found a great quantity of amianthos stones in mines in Italy. From these stones he prepared incombustible paper, skins and lamp-wicks and promised to



Detail from
Pieter Bruegel
the Elder's
The Alchemist
(see Alles Mist).



Medea casts her spells.

write an *Everlasting Book* with letters of gold. An eighteenth-century commentator, Adam Booz, laments:

If the famed incombustible oil were discovered once again, everlasting lamps and eternal fire would become ours.

Everlasting, ever-burning lamps were frequent among the Ancients.

Anamnesis

The doctrine of being able to remember a previous existence. In his 'magic parable', the *Monas Hieroglyphica*, about man's rôle in the universe and his ascent to God, John Dee contemplates man's spiritual transformation and the ways in which man can release himself from his body and return to his original divine nature.

Dee hints that he has had direct mystical contact with the Divine, and that through anamnesis he has been blessed with learning the Gnostic secrets of ancient magi, which he can now pass on to others. See also Dee; Gnostics.



Anatomy of Melancholy

A vast work on morbid psychology by that eccentric cleric, Robert Burton (1577–1640). The earlier editions contain sympathetic references to the fraternity of 'St Roses Crosse' and to alchemists.

Burton may indeed have been a Rosicrucian; his beloved books in his library are variously inscribed with sigils's and Rosicrucian dots •• and the three roses sign r r r, which was commonly used in the seventeenth century to denote alchemical societies. Many of Burton's books were on magic, necromancy and the Rosicrucian controversy.

Andreae, Johann Valentin (b. 1586)

'The Rosicrucian, who was not a Rosicrucian, the alchemist, who was not an alchemist.' This alchemist and occultist, and native of Württemberg, whose reigning duke was Frederick I, is best known for his alchemical allegory, *The Chymical Wedding of Christian Rosencreutz*. Published in 1616, the allegory took the form of a romanticized spiritual pilgrimage, with the hero, Christian Rosy Cross, being invited to a Royal Wedding, and experiencing over seven days not only the actual wedding in the wondrous castle full of heraldic and chivalric marvels and activities but, more importantly, the alchemical marriage of the soul. In fact, on the sixth day, Christian Rosencreutz witnesses an experiment in which alchemists, toiling hard over their furnaces, succeed in creating life, in the form of the alchemical Bird. Finally, on the seventh day, Rosencreutz is sent on his way with his band of followers, like the Argonauts, in ships to discover new lands. The island that he does discover is the one on which Andreae's Utopia stands, and which he writes about in his book, *A Description of the Republic of Christianopolis*. See also *Chemical Wedding*; *Palatinate*.

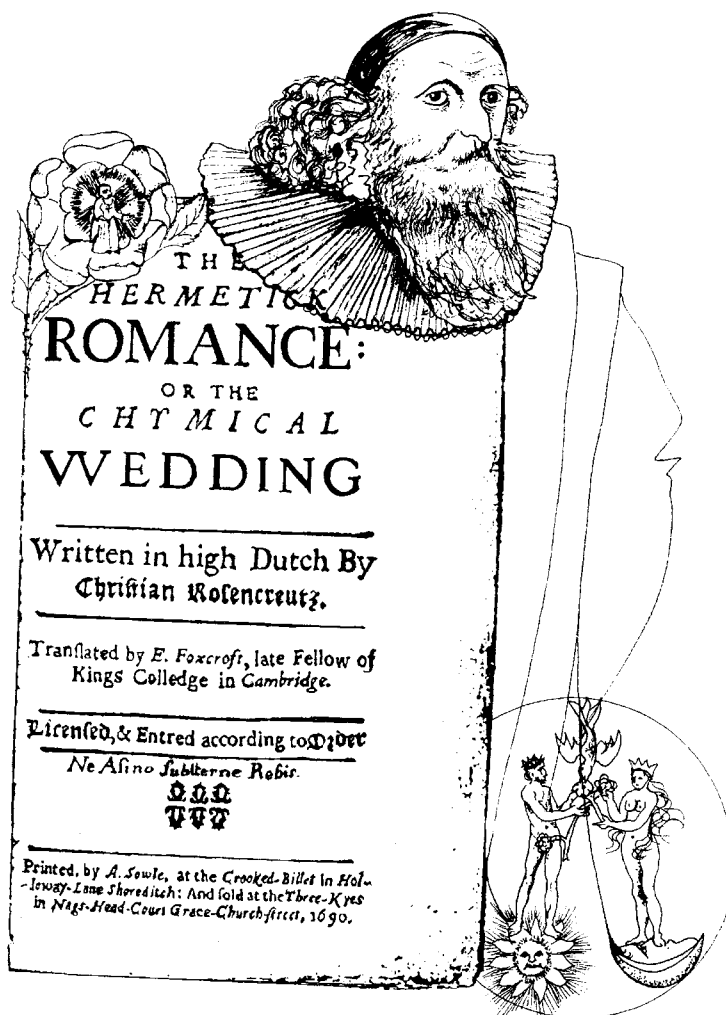
Androgyne

The hermaphrodite, half-man, half-woman, symbolically gelled in perfect union. See also *Rebis*.

Android

A robot, said by the seventeenth-century alchemist Michael Maier to have been constructed by the sage Albertus Magnus (1193–1280). Endowed with the power of speech, the android took 30 years to create. It proved an infallible oracle, answering every question put to it.

The shadow of the Rosicrucian Andreae hovers over the 1690 translation of his *Chymical Wedding*, while Adam and Eve symbolize the alchemical conjunction.





Ankh

According to one source, it was destroyed by Magnus's pupil, St Thomas Aquinas, just as primitive Scholasticism was destroyed by Aquinas's great theological commentary, the *Summa Theologica*. Or perhaps St Thomas was just jealous.

Ankh

The hieroglyph⁹ or 'crux ansata', which represents the ascendancy of spirit over the cross of matter. This symbol was the basis of John Dee's alchemical discourse, the *Monas Hieroglyphica*, and the learned German Jesuit Egyptologist, Athanasius Kircher (1602–80), commented on it as a world system. In the ancient world, figures of Hermes Trismegistus are sometimes shown with an ankh in one hand and a caduceus or serpent-staff in the other. See also Dee.

Antimony

The universal alkahest, indispensable to alchemists. Paracelsus observed 'As antimony refines gold so, in the same way, and under the same form, it refines the body.' It is the only metal that works on all the organs, and it is governed by all the planets, whereas most metals are governed by just one, as gold is by the sun and silver by the moon. It was known to the Ancients – Jezebel used it on her eyes – but made popular by Basil Valentine, that pseudonymous Benedictine who innocently killed off his monks with it ('anti-moine'),

thinking they would thrive on the herb containing it, just as the monastery pigs did. Fortunately, it cannot have killed them all, for once Valentine had perfected the Tincture of Antimony, it cured sufferers of VD. It was also the secret of the inimitable stained glass in Gothic cathedrals. See also Chartres; Dodecahedron; Rose Windows; Valentine.

Arabic

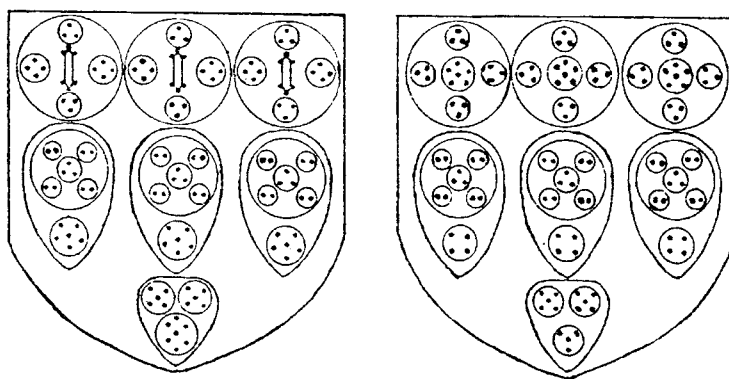
The language of a vast amount of alchemical material in the so-called Dark Ages that had come up through the Alexandrian Greeks, the Neoplatonists of the first centuries AD, then the Nestorians in Constantinople, and later in Edessa and later still in Persia. The Nestorians were well received and set up their scientific centre and academy in Jundeshapur. Here, under the great King Chosroes Nushirwan (reigned 531–79), the city became the most important intellectual centre of the time. Greek scholars (expelled after Justinian closed the philosophical schools in Athens in 529) converged here and met Syrian, Persian, Indian and Jewish sages. Later, under the Abbasids in the eighth and ninth centuries, with the founding of the library and translation school at Baghdad, came the great flowering of the Islamic Renaissance.

Much of the Greek wisdom on medicine, philosophy and alchemy was translated again, either direct from the Greek into Arabic or from Greek into Syriac (neo-Aramaic), and then into Arabic or Persian. See also Baghdad; Jundeshapur; Nestorians.

Aramaic

A Semitic language, written in Hebrew script. Some parts of the Old Testament were written in Biblical Aramaic or Chaldean, and many of the midrashim, or commentaries on the Bible were Aramaic. So was the *Zohar*, that magnum opus of Spanish-Jewish Kabbalah, which appeared in the thirteenth century. But the Aramaic prose of the *Zohar* broke all the rules

The arrangement of atoms in two types of antimony, seen under trance conditions by theosophist Annie Besant and colleagues.





of grammar, and its inventor, Moses de Leon, wrote in a highly fanciful mixture of Hebrew and Aramaic, with liberal literary borrowings from Babylonian and Talmudic sources.

One of the branches of Aramaic was Syriac, the literary language of the Christians and Gnostics of northern Syria and Mesopotamia. It was through this language that much of the Alexandrian alchemical material was conveyed into Arabic, centuries before it reached the Latins in medieval Europe.

Arbatel

As in *The Arbatel of Magic*, thought to be part of the forged fourth book of the huge compilation, *On Occult Philosophy* (1528) by Cornelius Agrippa. Whoever the author, the *Arbatel* heads the sixth section of the Harley manuscript 6482, which is called *De Magia Veterum* (The Magic of the Ancients). It is really a practical handbook for the summoning of angels via incantations and Enochian tables. Etymologically, 'arbatel' probably connects with the Semitic root, 'arba', 'four', hence 'the fourth book', but alchemists were so given to phonetic leaps that the word could well link with the Arabic and Persian 'arabah-t-el', the Arabian wheeled chariot, the 'vehicle of magic' by which, with the help of the summoned angels, the soul could ascend through the heavenly spheres and sephirotic paths to God. See also Cornelius Agrippa; Enoch; Yorede Merkabah.

Arcana

Secret remedies, of which Paracelsus was monarch.

Arcana Arcanissima

The Most Secret of Secrets, published in 1614, was the first treatise of Michael Maier, the greatest of literary alchemists, who started off as a Lutheran in Holstein and later became physician-chemist to the raving Emperor

Rudolph II of Bohemia. The *Arcana Arcanissima* is a discourse in six books devoted to interpreting Egyptian and Greek mythology in alchemical terms.

Archidoxis magica

That part of the *Philosophia Magna* that encompasses Paracelsus's cosmological and spiritual vision of the nature of God and creation.

The 'philosophy' is divided into 'nine members': magica (will power), astrologica (the spiritual influences and their reactions), signatum (the knowledge of the inner essence as obtained through outward signs), nigromantia (apparitions), necromantia (second sight), artes incertae (the arts of the imagination and inspiration), medicina adepta (the occult science of supernatural cures), philosophia adepta (the wisdom of alchemical skill and contemplation based on the science of the supernatural) and mathematica adepta (the science of occult relations, geometry, cosmography, measures, weights, numbers). The *Archidoxis Magica* explores these same themes in intricate and subtle detail, in language that is strikingly graphic yet strangely biblical. This work epitomizes Paracelsus's mature philosophy of the years 1537–39, not long before his death.

Argonauts

The men who sailed in the ship *Argo* with Jason to Colchis to recover the Golden Fleece have been likened to alchemists who embarked on the quest for gold. The Argonauts spoke the language of their ship, 'argot', slang or cant or secret language. They were thought to be a secret brotherhood, as were the Rosicrucians centuries later and the chivalric Order of the Golden Fleece, instituted by Philip III of Burgundy in 1429. Even the Hermetic Bohemian, Rudolph II, was invested with the chain of the Order in 1585 in Prague. The *Argo* was built of the fabled oak timber from the



Aristotle

shrine of the oracle at Dodona in Greece; it was the speaking vessel, the ship of the mysteries of Isis, the philosophic 'egg' of divine alchemical renewal. See also Colchis; Rudolph II.

Aristotle (384–322Bc)

An Athenian philosopher, the pillar of medieval alchemy, transmogrified by the Neoplatonists. Of all the Ancients, it was Aristotle, along with Plato, who exercised the greatest influence on alchemists throughout the ages. He was widely interpreted by the Alexandrians and by the Nestorian Christians who had fled persecution

Aristotle, after a
fifteenth-century
German woodcut.



in Egypt to the East. His *Categories*, *Organon* and *De Interpretatione* were translated into Latin by Boethius in the fifth century, and his metaphysical works were translated into Arabic by the translators in the new school of philosophy in Baghdad under the Abbasid ruler Al Ma'amun in the ninth century. Under this enlightened caliph, the Syriac Nestorian, Hunayn, translated a phenomenal number of medical and philosophical treatises, including Aristotle's. After Hunayn, the next greatest codifier of Aristotle was Avicenna (980–1037), son of a Persian civil servant. Thereafter, Aristotle travels on through the Arabians and Jews to Spain in the eleventh century via Avicbron, Averroes, Maimonides and thence to Aquinas, who Christianizes him and lets him loose among monks and alchemists of Europe.

Arsenic

The red mineral realgar As_2S_2 and the yellow mineral, orpiment, were known to the Ancients and used in medicinal and magical cures. The fifth-century Greek alchemist, Olympiodoros, described white arsenic (arsenious oxide As_2O_3).

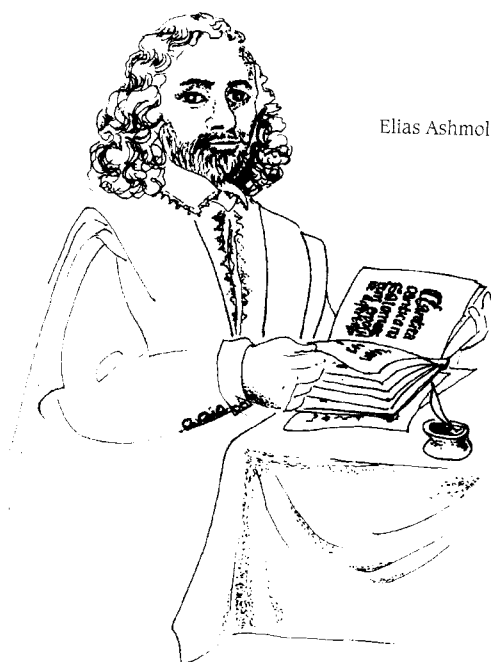
Ashmolean Collection

A living memorial to that old mole, Elias Ashmole, whose antiquarian burrowings for bibliographies led to the pearls of alchemical texts he collected in his vast *Theatrum Chemicum Britannicum* (printed in 1652, now in the Bodleian Library, Oxford).

As the tersely towering A.E. Waite wrote: 'Those who knew Ashmole will be aware that a mystical understanding of alchemy lay far beyond his measures.' Apparently, Ashmole 'knew enough to hold his tongue, but on his own confession not enough to speak; who was therefore by profession an amateur as regards the Art (of alchemical transmutation), an antiquary and editor as regards some of its memorials'. But Ashmole did believe he had received from his adept and individual master



the Secret of the Great Work. This 'master' was, according to Ashmole's *Diaries*, one William Backhouse. Ashmole lived for 40 years after this great event, and pursued his researches as an antiquary, although there is not the least reason to suppose that he proceeded to any laboratory practice of alchemy.



Elias Ashmole

Atalanta Fugiens

A rather extraordinary alchemical allegory by Michael Maier, published in 1618 at Oppenheim at the expense of Johann de Bry. On the highly decorative title-page, Maier explains turgidly in Latin the purpose of *Atalanta Fleeing, that is, New Chemical Emblems of the Secrets of Nature*. It is 'partly for the eyes and intellect' and 'partly for the ears and the soul's recreation'. The eyes and the intellect feast upon the 50 magical engravings and epigrams, which take up 50 right-hand pages of the double-spreads, while the ears are transported by the 50 musical fugues notated on the 50 left-hand pages, and presumably the soul contemplates all. The

emblems illustrate the mythical Atalanta, who could outrun all her suitors, but who was caught by Hippomenes (helped by Aphrodite) who dropped three irresistible apples, one by one, in her path. Through her stopping to pick them up, Hippomenes catches her up and ravishes her in a cave, where, through Aphrodite's jealousy, they are turned into lions. Alchemically, Atalanta is the fleeing Mercury, fixed by Hippomenes, the golden Sulphur. When the two substances conjoin in the glass vessel, they form the royal red Tincture. The pictures remind one of Holbein's biblical woodcuts, and early Italian flattened architectural vistas, but they are also strangely surrealistic, with people and objects suspended in odd attitudes representing alchemical processes. Emblem 24 shows a king being eaten by a wolf, while in the background the king has revived and is prancing off from the flames in which the wolf is now burning. Emblem 2 shows a woman with a bloated globe for a body, suckling a child from the geographical contours of her breasts. Emblem 1, entitled 'The wind has carried him in his belly', depicts the male wind Boreas with a womb, in which can be seen a foetus. Emblems 1 and 2 both illustrate the aphorisms of *The Emerald Tablet of Hermes Trismegistus*, concerning the nature of the Philosopher's Stone. Maier draws far-fetched parallels between mythology and alchemy, and he aims at harmonizing it all with the musical accompaniment, which is for three voices: 'Atalanta, or the fleeing voice ... Hippomenes, or the pursuing voice, and the apple in the path, or the delaying voice.' Maier is not a very accurate composer, but he apologizes to the reader and asks him to amend the slips for himself.

Incidentally, the original format of the first edition was octavo, with its page dimensions obeying the humanistic Golden Section of the ratio 2:3. When both the left-hand page and the right-hand page are contemplated together as a spread, the ratio becomes 3:4. So, the general formula of the book is in the four



Athanor

related elements 2:3 :: 3:4, or octavo is to quarto, or male is to female.

Athanor

From the Arabic 'al-tannur', one of the three essential apparatus of the alchemist, a calcinatory furnace that allows coke to burn very slowly. The other two important apparatus were the retort, sometimes called the philosopher's egg (a glass vessel with a long, down-bent neck for heating mercury for purification) and the crucible (an earthenware melting-pot for metals).

Avicenna

(b. 980 at Afsana, near Bukhara; d. 1037)

Avicenna, after a detail from the title-page of his works published in Venice (1544).

This 'Aristotle of the Arabians' (in fact a Persian), who was taught arithmetic by a greengrocer, became a court physician at 17 and later a grand vizier to a certain Shams (*sic*) at Hamadan. There he proliferated, literally: his million-word *Canon* amalgamated

Aristotelian biology with Hippocratic medicine. Among his 760-strong hoard of drugs, he mentions mandragora and cannabis. In shrewd Muslim alchemical tradition, he accepts the transmutation of metals; he also affirms that philosophical (i.e. alchemical) gold is better than mined gold; that everything consists of the four elements; that these are constituted of the first matter; that they can change into one another; that every metal consists

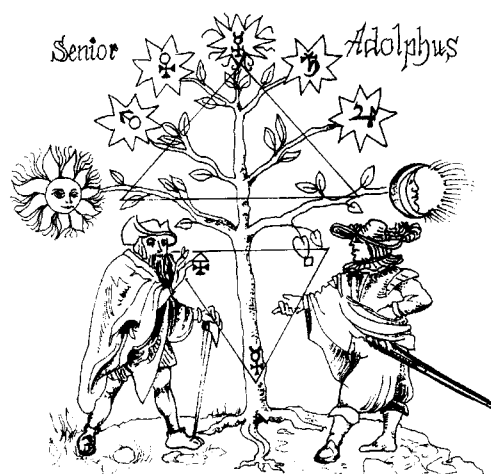


of mercury and sulphur. This Islamic genius passed into legend, immortalized by one of his own long-life elixirs. See also Philosophic Mercury, Salt and Sulphur; Prima Materia.

Azoth

One of the many aliases of myrionymous mercury, a corruption of 'al-zauq' (Arabic for the metal mercury), but considered to have great occult power because it is a cabalistic acronym of the first and last letters of the Greek, Arabic, Roman and Hebrew alphabets: A and Z, α and ω (o long), א and ת; thus AZωת beginning and end, the Universal Medicine. In alchemical jargon, 'the azoth of the philosophers is their mercury' bizarrely becomes: 'M. the azothi aoeftu epuhiloqosphersa lisati ptheiuri imeracurety.' Nothing like putting off idle seekers!

A Z O T H, OU LE MOYEN DE FAIRE l'Or caché des Philosophes. De Frère Bafil Valentine



Azoth, the tree of Universal Matter bearing the seven metals and planets and (lower triangle) the symbols of Sulphur ☿, Mercury ♀, and Salt/Body/Four Elements □. The adept Senior initiates his disciple Adolphus.



Babylonia

The home of Geonic Kabbalah and, since time immemorial, home to alchemists of totally different backgrounds: Nabateans, Chaldeans, Jews, Syriac Nestorians, Persians and Arabs.

Historically, few outsiders reached Babylonia from the West, situated as it was between the inaccessible Tauros and Tagros Mountains, 4572 metres (15,000ft) high, which guarded the source of the Tigris, the great and mythical river that meandered its 1850 kilometres (1150 miles) down past the ruined sites of ziggurats and Babylon to modern Baghdad and the alluvial plains of the Persian Gulf.

Renaissance travellers from Europe did not travel for travel's sake: they were usually the military, or merchants, or mystics. The Hanging Gardens of Babylon and the splendours of fable on the whole remained just that: fable! Anything connected with Babylon was to the early Christian Fathers a symbol of corruption, like Sodom.

The best philosophical account of Babylon was by the Spanish Jewish wanderer, Rabbi Benjamin, who in 1160 set out to visit the site where his forefathers had suffered exile by the rivers of Babylon. He certainly must have encountered a hotch-potch of people at Mosul, near ancient Nineveh: alchemists, philosophers, scholars, medicine-men, Kabbalists and so on.

He took a year to get there, speeding overland from Constantinople, but was then so relieved to put his blistered feet up that he floated down the Tigris to Baghdad without actually looking very hard at the extraordinary earth-mounds and ruined cities along the littoral.

At Baghdad, still a seething centre of alchemy, medicine, mathematics and optics, he

was welcomed among the 20,000 Jews there and wrote his description of Babylon, probably without visiting the 'Tower of the Dispersed Generation', so wild were his accounts of the 300-metre (1000ft) high tower, which had been 'split to its very foundations' by the heavenly fire that had struck it.

Bach, Johann Sebastian (1685–1750)

'This composer ... used music in its law linked to mathematics ... for the restoration of balance ... The effect is that while listening to his music, the salt, sulphur and mercury equilibrium is restored in the biological structures of plants, animals and humans.' So believes Theo Gimbel, the sound and colour therapist.

Backhouse, William

(b. 17 January 1593; d. 13 May 1653)

Elias Ashmole's teacher in alchemy, who confided to him the root secret concerning 'materia prima'. According to Ashmole's *Diaries*, William Backhouse is first mentioned on 13 April 1651 and described as being of Swallowfield in Berkshire. On this date he caused his pupil to 'call him Father thenceforward'.

Ashmole notes on 10 June 1651 that his teacher had communicated many secrets to him and, on 10 October 1651: 'This morning my Father Backhouse opened himself very freely, touching the Great Secret' (i.e. of how to make the alchemical Stone).

Finally, on 13 May 1653, Ashmole writes: 'My Father Backhouse lying sick in Fleet Street, over against St Dunstan's Church and not knowing whether he should live or die, about eleven of the clock, told me in syllables the True Matter of the Philosopher's Stone.' Thereafter Backhouse quietly passed away.

Backward Language

One of the ways, along with cryptic language,



Bacon, Francis

symbols and anagrams, of keeping off the profane and preserving secrecy. The alchemical instruction 'Take that matter you well know', becomes 'Wonk llew ouy rettam taht ekat.'

Bacon, Francis (1561–1626)

A scientist, alchemist, freemason and visionary, Bacon bestrides the world of the Renaissance magical imagination and the New Age of Reason. He is both a Utopian, as in his *New Atlantis*, discovered after his death in 1626, and a realist, as in his *Advancement of Learning* (1605), advocating a matter-of-fact method of scientific research. Yet this same realist planned and produced the *Masque of the Middle Temple and Lincoln's Inn* that Francis Beaumont had written in preparation for the marriage of Frederick V of the Palatinate and Elizabeth, daughter of James I – the wedding of all weddings, symbolic of the alchemical union of Rhineland and Thames.

Bacon's life's aims are summed up in his *New Atlantis* – a safe Christian island of brotherly love, Rosicrucian Brothers in all but name, which houses a great college called Salomon's House, which is parallel to the Invisible College of the Rose Cross Fraternity where priest-scientists conduct their researches into advanced arts and sciences. They remain invisible to the outside world but sally forth every 12 years to glean information, both esoteric and scientific and to act in saintly fashion, harmonizing and healing in the world outside. See also Andreae; Palatinate; Rosicrucians; Utopia.

Bacon, Roger (1214–94)

A Franciscan monk, known as the 'Doctor Mirabilis', Bacon was the first great exponent of the methods of positive science, which he applied particularly to the study of language: Hebrew, Greek, Arabic, Chaldean/Aramaic.

He was familiar not only with Aristotle's *Physics* and *Metaphysics*, but also Avendeath, Gundisalvus and Avicbron. In his *On*

Metaphysics (1266) he quotes freely from the alchemists Isaac Israeli and Petrus Alphonsi. The application of alchemy in the extension of human life was another subject of study with Bacon: 'The glory of going on and still to be.'

In this connection he mentions Artephius, an early Latin alchemical writer of uncertain date and origin (perhaps Al Toghrai, the Arabic poet and alchemist who died about 1119).

In his *De Potestate Mirabili Artis et Naturae* Bacon gives an alchemical instruction:

Take salt and rub it diligently with water, and purify it in other waters. Afterwards by diverse contritions, rub it with salts and burn it with sundry assation, that it may be made a pure earth, separate from the other elements. Understand me, if thou art able: for it shall be composed undoubtedly of the elements, and therefore it shall be a part of the Stone which is no Stone and is in every man; which thou shalt find at all times of the year in its own place.

Bacon believed that the Stone was composed of the four elements, as were all things else, including human beings. Elsewhere in this tract, Bacon defines alchemy as the Science of a certain Medicine or Elixir by which metals are transformed into other metals and those which are imperfect are raised into a perfect state.



Roger Bacon



The secrets of Philosophy are hidden in the four elements, Mercury and Sulphur and the principles of all metals, says Bacon in his *Speculum Alchemiae*, and the intention of nature is to produce gold, but 'many accidents intervene'. He apparently left a ciphered manuscript with a formula for making copper. In the library of Pennsylvania University is a retort and a certificate dated 1 December 1926. This retort contains metallic copper made according to a secret formula of Roger Bacon.

Michael Maier printed a picture of Bacon in a cloak, with weighing scales, for his *Symbola Aureae Mensae Duodecim Nationem* of 1617, with the tongue-in-cheek motto, 'No one who sails West can reach the East.'

Spurred on by the success of this 1617 publication, Maier's publisher reproduced the same engraving of Bacon the following year in Maier's *Tripus Aureus*, but this time assigning the likeness to the alchemist Basil Valentine. See also Maier; Philosopher's Stone; Valentine.

Baghdad

The renaissance in Baghdad happened four centuries earlier than in Spain and eight centuries earlier than in central Europe. For scholars, mystics and scientists from all over the Middle East, Baghdad acted rather like the melting-pot or crucible that twelfth-century Toledo was to become in Spain or Prague was to become under Rudolph II in the sixteenth century.

Under the patronage of the Abbasid founders of Baghdad in the eighth century AD, flourished separate schools of Muslim, Greek and Christian thought; schools of translation, medicine, alchemy, science, astrology and mathematics. The philosophic school, known as The House of Wisdom, was founded here by the Abbasid Caliph Al Ma'amun.

There flocked Indians and Orientals across the Silk Road, displaced Syrians from Antioch, Jews from Byzantium or Jundeshapur, Nestorians from Edessa, all seekers caught in the ferment of dissolute empires (notably the

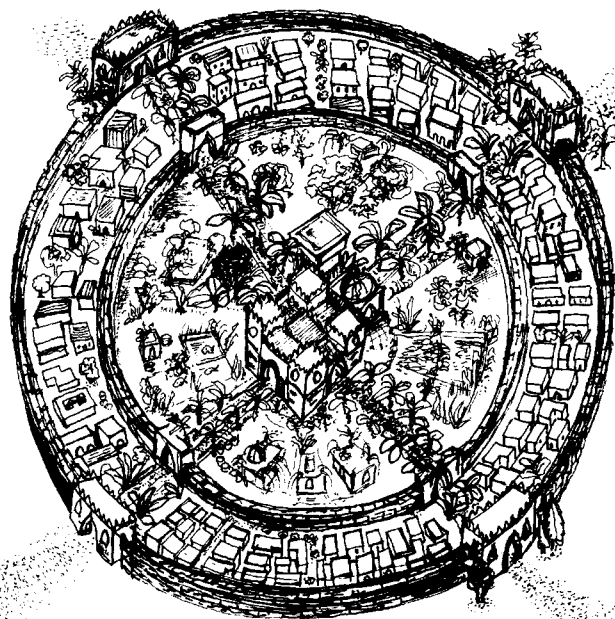
Holy Roman), caliphates or emirates.

At Baghdad settled the greatest ninth-century alchemist-scholar, Hunayn, who looked after the newly founded library. Here the alchemists Avicenna, Al Kwarizmi, and Rhazes came to study among the papyri rescued from Byzantium and the scientific scrolls of Sufis and naturalists.

In this city gathered the secret brotherhood of alchemical philosophers – banned by the orthodox in Baghdad – known as the Brethren of Purity. Their tenth-century labour of love was to compile an encyclopedia of 52 treatises on the sciences, encompassing earthquakes, minerals, tides, and the elements, all examined in connection with the celestial spheres and the possibility of alchemical transmutation.

Baghdad, right up to its capture in 1258 by Hulagu, grandson of Genghis Khan, remained a civilized asylum of falsafa (philosophy), kalam (theology) and tasawwuf (mysticism).

Baghdad, as laid out by the second Abbasid Caliph Al-Mansur in AD763: a perfect circle with the palace and mosque in the centre and residential quarters round the edge.





Bain-marie

Bain-marie

The common-or-garden French steam-pot, which goes back to the biblical Miriam, Moses' sister, otherwise Mary the Jewess, who sloshed her alchemical concoctions around in one. This industrious lady, who is also credited with the invention of the dibikos and the kerotakis, somehow got transferred from Hebrew tradition to Greek. See also Dibikos; Kerotakis.



Physician and urine flask, after a woodcut from Bartholomew's encyclopedia, 1518 edition.

Barbara

An empress of uncertain pedigree, the second wife of Sigismund III Vasa, King of Poland (reigned 1587–1632).

The desperate Barbara, perhaps in a last-ditch effort to restore the raided Treasury before the collapse of eastern Europe in the Thirty Years' War, attempted to make coins out of a precarious mixture of arsenic and urine (a passable imitation of silver), and gold copper and silver (resembling pure gold).

Bardaisan (AD154–222)

One of the early Gnostics from Edessa, where Syrian, Mesopotamian and Armenian influences merged with Christianity under the kings of the House of Abgar and thought to be the father of Christian Syriac literature, Bardaisan (sometimes spelled Bardesanes) had distinct traces of the religion of Zoroaster. He would have been typical of those who transmitted Byzantine alchemy from Alexandria to Constantinople and then Edessa.

In his theory of the origin of the world, God and the five uncreated elements lived in harmony: Light was in the East, Wind was in the West, Fire was in the South, Water in the North, and Darkness in the Depth below. But owing to some unexplained cataclysm, Darkness began to emerge and take over. Hence Evil and the need for the Redeemer, Jesus Christ.

Bardaisan influenced the Persian scholar Mani (216–276), who in turn influenced the

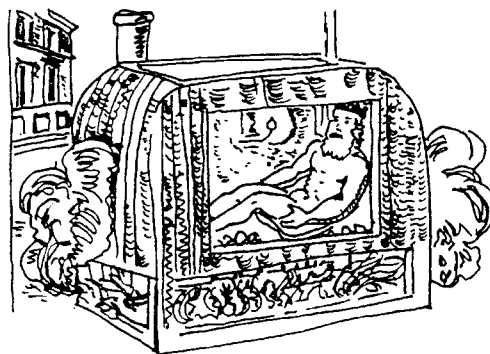
churches of Turkestan and North Africa, which in turn influenced St Augustine in his early life.

Bath

There were two main types. The first was the sand-bath, or athanor, a calcinatory furnace for the first stage of the alchemical Operation, in which the Salt or body of a substance was calcined from the Mercury or essence, and from the Sulphur or soul.

The other sort was the steam-bath, in which purification by vaporizing (often with sulphur or mercury as volatile menstruums or catalysts) took place. In this Emblem from *Atalanta Fugiens* (Atalanta Fleeting), the King, or impure gold, is being purified with his bile while he soaks in his bath, and the dew washes all the bile away.

Baths and fountains aplenty spray their way through allegories of alchemy. In his *Allegorie de la Fontaine*, the geriatric adept Trevisa writes: 'They purge the king in the fountain ... where he bathes for 282 days' (the length of time for all the alchemical processes of matter to become the Philosopher's Stone). See also Bernard of Trevisa.



The King in his bath.

Batman

Shakespeare's source for Hebraeo, Arabian science! In 1240, the Franciscan, Bartholomew the Englishman, had compiled one of the most



popular encyclopedias on the physical sciences, taken mainly from the English Abbot Alexander Neckham's Latin translations of Neoplatonist alchemist – philosophers such as Algazel. The encyclopedia was called *On the Properties of Things*, and John of Trevisa, the Cornishman, translated it into English in 1398. A century later it was printed with quaint illustrations by Wynkyn de Worde; and almost another century later in 1582, it was re-edited by Batman, and known simply as *Batman upon Bartholome*. This was the text that Shakespeare studied.

Beauce

One of the oldest sites for pilgrims of spiritual alchemy, Beauce was 'the land of saints' upon which stands Chartres (the Holy Place of the Guardians of the Stone). It was the land that the Gauls consecrated to Belisame (Belisa, Belsa, Biausa, Beauce), consort of Belen the Ram, God of the Spring Equinox.

Beauce was the land of sacred stones, menhirs and dolmens; it was the land that brought forth Gargantua, Son of the Giant Stone, who was the great mover of stones. See also Chartres; Rabelais.

Becher, Johann Joachim

(b. 6 May 1635, d. October 1682)

Born in the New Agers' Paradise, the Palatinate, Becher was an intelligent economist and physician: in the first instance, advising Leopold I in Austria, in the second, the German Court at Mainz. But he was an unintelligent alchemist; he tried to turn the sands of the Danube into gold. His failure to achieve this incurred courtly displeasure in Austria, so he fled to Holland, then to England, where he devoted himself to recording his theories on chemistry and alchemy. He divided solids into three kinds of earth, of which one was 'terra pinguis', fatty earth, the principle of inflammability. He equated this with alchemical sulphur.

Becher's ideas on sulphur were later

developed into the phlogiston theory by his pupil Georg Ernst Stahl.

Attributed to Becher is the observation: 'False alchemists seek only to make gold; true philosophers desire only knowledge. The former produce mere tincture, sophistries, ineptitudes; the latter enquire after the principles of things.'

Bembine Tablet

A bronze and silver tablet, supposedly bought by Cardinal Bembo after the sack of Rome in 1527, it is engraved with Egyptian hieroglyphs. This tablet was interpreted as holding the key to many sacred alphabets.

In the centre of the tablet is Isis, iynx, the power of transmission, emblem of universal being.

Benben

The most sacred object within the temple of ancient Egypt, it is a conical stone symbolizing the primeval mound that emerged from primordial waters at the creation of the universe. See also Herm; Prima Materia.

Bernard of Clairvaux (1090–1153)

The first Gothic individual, as opposed to collective, monk, Bernard was a very withdrawn man of the Benedictine order, who set the fashion for individual salvation via a personal meditation, a transformational spiritual alchemy.

Born north of Dijon, Bernard was sent for military training but preferred to cope with the temptations of adolescence on his own. He had a decidedly suggestive vision of the Virgin Mary, to whom he prayed, 'Show thyself a mother'. Upon which, the Virgin expressed several drops of milk from her breasts into Bernard's lips.

Nonplussed by this, Bernard went back to his military training. He later joined the monks at Cîteaux (the Cistercians) with his family of



Bernard of Trevisa

31 in tow. They were themselves reacting to a convoluted liturgy, and wished for the simple life of work and prayer, obeying the alchemical motto 'Laborare est Orare'.

It certainly wasn't easy. Bernard and family were in an ambience of monastic malnutrition, disease and death. Nonetheless, Bernard doubled the numbers of the monastery and revived it as a Hermetic paradise. Then he left to found a daughter abbey in Paris, and moved on to Clairvaux, where his fame among spiritual alchemists desiring transcendence bordered on the legendary.

Some say that Bernard masterminded the Knights Templar in their crusade for the Grail and that it was he who instigated the Gothic style of architecture together with Abbot Suger, the great cathedral-builder of St Denis (< Dionysius) in Paris.

Bernard of Trevisa

(b. possibly in 1406, Padua)

An obsessional seeker of the Stone, this fabled alchemist spent his whole life pounding around the world in pursuit of the Stone, with short breaks between each foray. All is recounted in the supposedly autobiographical *De Chemico Miraculo*.

Berthelot, Marcelin (1827–1907)

A chemical synthesist and Professor of Organic Chemistry at the Ecole Supérieure de Pharmacie and then at the Collège de France, Berthelot was one of the great nineteenth-century compilers and interpreters of alchemical texts through the ages. The assiduous Berthelot was the first modern French scholar to rescue alchemy from the disrepute into which it had fallen during the eighteenth century, as science had advanced.

Berthelot weighed up the evidence of the early Byzantine and Alexandrian alchemical papyri, made a huge index of them, translated them into French and presented his thesis that alchemy was not just fraudulent practices in

glass-tinting and metallurgy but was founded on mystical elements.

Among the first to write a systematic history of alchemy, he linked the Egyptian, Alexandrine and Syriac traditions with Gnosticism and Magic.

He made the Alexandrian alchemists accessible: Zosimos, Synesius, Olympiodoros, Stephanos *et al.*

To Berthelot's *Collection des Anciens Alchimistes Grecs* A.E. Waite owes much, as does the slow stream of twentieth-century philosophers of alchemy, through Waite.

Berthelot's amassed works consist of: *Les Origines de L'Alchimie* (Steinheil, Paris, 1885), *Collection des Anciens Alchimistes Grecs* 3 vols (Steinheil, Paris, 1888) and *La Chimie au Moyen Age* 3 vols (Imprimerie Nationale, Paris, 1893).

Bible

Of all the sacred books that alchemists claimed as their source, the Bible is the most used, misused and abused in the holy work that alchemy stood for. Could it be just coincidence that so many alchemists had been brought up on one end of the Bible or the other?

The whole gamut of holy men have played on the alchemical stage: monks, friars, rabbis, cabalists, popes, abbots, saints and prophets. At the Jewish end were Philo, Isaac of Kairouan, Maimonides, Avecebron, Farragut, Moses de Leon and many others. Among those trained in holiness at the Christian end were Bernard of Clairvaux, John of Salisbury, Abbot Trithemius, Bishops Grosseteste and Gundisalvus, Gerard of Cremona, St Thomas Aquinas, Burton, Kircher, Bruno and Ripley the Canon of Bridlington. Famous among the fabled readers of Holy Writ are Basil Valentine, Arnold Villanova and Abraham the Jew (celebrated by Flamel). Even Isaac Newton set off to Cambridge first to become a clergyman.

Every permutation of Bible or breakaway Bible has been pored over and quoted in the invocations of alchemy, from the earliest



Alexandrine papyri (from which comes the meaning of 'Bible', 'biblios', 'little books', 'the inner bark of papyrus'), the Torah, the Hexapla, the Vulgate, the Syriac Peshitta, the King James's Bible, through to the wondrous 1669 London Polyglot, edited by Brian Walton.

Since most alchemists were forced underground, and most alchemists were unorthodox anyway, so was their bible. Put the lid on religion and it will squeeze out sideways. So did the alchemists' holy sourcebooks: the *Pimander*, the Old Testament midrashim, the *Zohar*, anything from targums to tosh. Even the *Zohar* became respectable in the face of some of the bibles: the grimoires, Chaldean Oracles and books of spells.

Of all the holy sourcebooks, the most persuasive were the *Pimander*, the *Zohar*, the apocryphal Book of Enoch (for angel magic), the Book of Kings (for the Temple of Solomon and the Ark), the Book of Genesis and St John's Gospel (for the creation of man, cosmology, the nature of earth and the holy Tetragrammaton or Word of God).

To placate the inquisitorial prelates, many a monkly alchemist dedicated his own writings to a pope or promoter of orthodoxy. Thus Reuchlin dedicated his *De Arte Cabalistica* to Pope Leo X in 1517. It concentrates not only on the holy four-letter word (יהוה Jahveh), but the holy five-letter word (יהשוע Jesu), which is the unutterable four-letter name of God made utterable with the sounded 'ש', ('sh') added. This book on cabalistic contrivings became the bible of Christian alchemists.

The commonest biblical symbols used by alchemists are: the Grail, the Ark or the Chalice; the Temple of Solomon; the Cross; the Three Magi; the four Archangels; the holy four-letter word; the Tetragrammaton. See also Midrash; *Pimander*; Targums; *Zohar*.

Bibliographics

The art of compiling bibliographies. Many of the early alchemical bibliographies were pure invention, giving an air of authority to an

unknown experimenter, who would include his own name among those renowned and indeed would make up titles of his own purported works, as did the alchemist Michael Sendivogius, alias Helvetius. A truly monumental bibliography of alchemy is that of J. Ferguson.

Bibliotheca Chemica Curiosa (The Careful Enquirer's Chemical Library)

One of half a dozen monuments to alchemical literature, collected in two fat folio volumes through the energies of its editor, Jean-Jacques Manget. For other famous pillars of editorship see Berthelot, Ferguson, Jennis, Waite, Westcott and Zetner. See also Ashmolean Collection

Binah

Tin, in the alchemical Kabbalah.

Black Madonna

The Black Madonna is associated with three Goddesses: Isis, the Egyptian goddess of fertility; Mary, Mother of Christ; and Diana, the virgin Roman goddess. She represents the unpurified virgin, the feminine principle awaits the Nigredo (the purifying of the earth, of the 'Kemi' or 'al-chemy').

The Black Madonna was linked with Isis well before any Christian connotations with the Virgin Mary. Statues existed in underground crypts in Gaul before the Romans. Isis was known as 'virgo paritura,' the virgin-about-to-give-birth, the virgin earth before its fecundation by the Sun. There are various stone monuments attesting this: one at Die (near Grenoble, in France) is inscribed 'Matri deum, magnae ideae'. So Isis was the Mother of the Gods, too.

In alchemical symbolism, the Black Madonna was the virgin earth, first matter of the Great Work, friable black brittle substance that comes in mineral state from the ore-bearing strata beneath the rocks.



Blood

So the statues, personified hieroglyphs of this mineral, have its black colour, and their dwelling-places are the underground crypts of temples.

Interestingly, there is a Black Madonna at the shrine of Einsiedeln in Switzerland, birthplace of the alchemist Paracelsus, as well as two Black Madonnas at the Druidical site of Chartres. In Jelenia Góra, Poland, pilgrims still flock to the Monastery to pay homage to the Byzantine-like Black Madonna and Child on the Feast of the Virgin Mary (15 August). There are probably no more than a dozen Christianized Black Madonnas now left in Europe, although there is a statuette of Isis at the Cathedral of St Etienne at Metz, and a Black Aphrodite on Cyprus.

Blood

Associated with primordial sea, from which life evolved 3.2 billion years ago, blood is the universal liquid conveyor-belt of life, its fluidity representing the sacrificial blood of the Lamb of God. In the Grail legend, Christ's blood was collected in the Grail cup, which had been carved from the gem that had dropped out of the crown of Lucifer when he fell from grace.

Alchemically, its red colour symbolizes gold, whose planet is the sun. The heart is the sun of the body, and the bloodstream, like the sun's radiation in the solar system, extends to its every part.

The bloodstream is the diffuser of central energy to all the organs. Through its renewable properties, blood is the transformer of man.

Depending on the proportions of the different hormones borne in suspension in the bloodstream, man is what he is. The average composition of a person's bloodstream determines his more permanent tendencies. And yet man affects these natural tendencies; he can temper them through meditation and contemplation, which slows them down, or through anger and nervousness, which speeds them up.

An alchemically made bloodstone from the

blood of a sick person has the effect of 'drawing off the bad', as the modern alchemist Jack Glass terms it.

Bodleian Library

Of the libraries owned or visited during the Renaissance by famous alchemists, the most famous belonged to Trithemius of Spanheim, Nicholas of Cusa, John Dee and Sir Thomas Bodley.

In 1556 Duke Humphrey's library at Oxford suffered no less than those of other learned men, for in that year an Act against Superstitious Books and Images was passed. Down with books on Daemonology, Magic, Alchemy, Witches and Heresies so thirsted after by Renaissance man! No wonder John Dee's library at Mortlake was burned down and that Duke Humphrey's library remained 'a great desolate room' for over 40 years after the Act, until Sir Thomas Bodley, scholar and philanthropist, used his great influence to refurbish the Room in 1602 and line its walls with books of learning for the general public. Catholic in his taste, he acquired books from all disciplines: philosophy, religion and science, the classics, mathematics, music, alchemy.

From that time on the Bodleian Library has always been international in character. Bodley himself, brilliant, restless, Fellow of Merton College, Oxford, was widely-travelled and had lived in Geneva and The Hague. He was proficient in French, Spanish and Italian as well as ancient Greek and Hebrew. He snapped up books in ancient Chinese, Syriac (the language of alchemy, intermediary between Greek and Arabic), Turkish, Arabic and Persian, even though he could find nobody contemporary to translate them. He was convinced that 'in processe of time, by the extraordinaire diligence of some one or other student they may be readily understood'.

Bodley's imaginative librarian, Thomas James, published the first Library Catalogue in 1605. Thereafter, the Library's reputation grew rapidly, and between 1620 and 1640 there



were 350 overseas readers registered – alchemists, philosophers and mathematicians from all over the Mediterranean.

As a splendid encouragement to all authors and editors, Bodley had struck an agreement in 1610 with the Stationers' Company to receive a free copy of 'All new Books and Copies never printed before'.

Body

In practical alchemy the body represents matter that 'has to be separated by pounding, roasting and fire', as the alchemist Edward Kelley says. In metaphysical alchemy, the body parallels Salt, or the third constituent in the alchemical triad: Mercury, Sulphur, Salt.

In the transmuting or raising of vibrations, the body is purified of dross and raised to a higher level. It is not just a haphazard adjustment in the laboratory, but an entire change: 'a body with raised ideals,' says Jack Glass in his practical workshops.

Philosophically, every metal is made up of Salt with Sulphur and Mercury, but in different proportions. Only gold has equal proportions of Salt, Sulphur and Mercury. All other metals are out of balance because they are imperfect. Of the many allegorical references to the 'body' in alchemical literature, the most curious are by Paracelsus. In his *Astronomia Magna*, Paracelsus talks of three schools where man should send his three bodies:

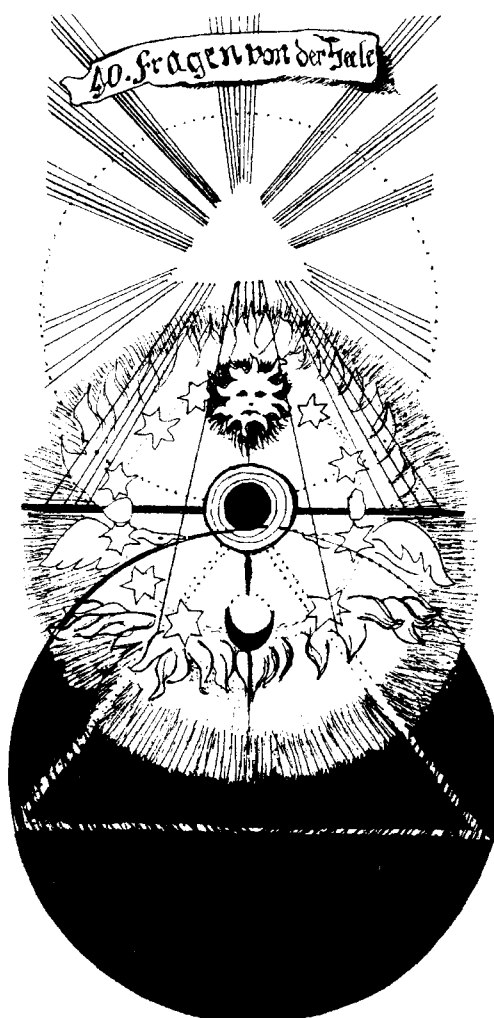
He should send the elemental or material body to the elemental school, the sidereal or ethereal body to the sidereal school, the eternal or luminous body to the school of eternity. For three lights burn in man, and accordingly three doctrines are prescribed to him. Only all three together make man perfect.

Each body has attributes according to its nature. To the physical body, Paracelsus ascribes luxury, lewdness and animal instincts. On death, this body returns to water and earth. To the sidereal body belong feeling, art and

wisdom. This body disperses in air on death. It is the subtle body. To the eternal body belongs the striving for the knowledge of God, and on death this body rises to God.

Boehme, Jakob (1575–1624)

A contemplative cobbler from Gorlitz, Silesia, Boehme uplifted his Christotheosophical light over the Lutheran backwash. He did not claim to be a practising alchemist or define the physical properties of the 'dark disesteemed stone of grey colour'. Yet, although he had it 'not in the praxis', he wrote 'in the knowledge of the spirit' about the Stone and the Word:



Theosophical emblem on the Soul, after Jakob Boehme.

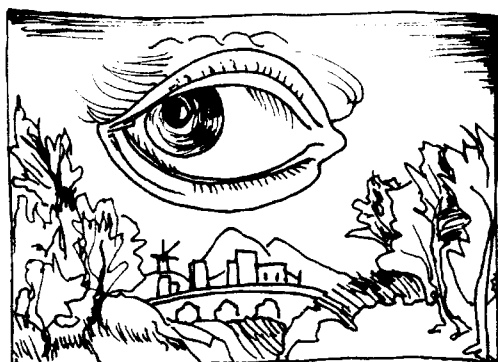


Boethius, Anicius

the Word was the only noble spiritual Philosopher's Stone, Christ. This Teutonic Titan covered every mystical aspect of alchemy: 'Alchemy in the cosmos: its First Matter and its Three Principles, Alchemical work in Man: the threefold life in him, The Eternal Essence and the Tincture in Man and Nature.'

His *Aurora* (1610) was indeed a dawning in the seventeenth century. 'A jewel in the brummagem setting of Reformation rubbish,' Waite called it. Boehme looked with the eye of Time into the Eye of Eternity.

The Eye of the God,
after a woodcut from
Horapollon's
Hieroglyphica.



Boethius, Anicius (AD480-524)

Walter Lang, in his introduction to *Le Mystère des Cathédrales* by Fulcanelli, denies that there were any Roman alchemists:

Greece stood to Rome as parents to offspring, and Rome proved to be a delinquent child and a degenerate adult in the community of human cultures. The plant of alchemy flowered only briefly in Greece and the seeds that blew to Rome never germinated at all.

This overlooks one of the greatest transmitters of Greek wisdom to the Middle Ages: Anicius Boethius, the Roman philosopher and spiritual alchemist. Francis Bacon tells us that Boethius was the first to make the West acquainted with Aristotle.

Bogomils

One of the Gnostic groups driven out of Byzantium by the Roman Emperor Tertullian, champion of orthodoxy, in the second century AD, and attacked by various bishops for their heresies, they gradually settled in the Balkans, where they practised alchemy and spread the word of the Gnostic alchemists Zosimos of Panopolis and Stephanos of Alexandria.

Bohemia

The melting-pot of Renaissance alchemy, Hermeticism and Rosicrucianism. What could not happen in Protestant England could happen here. The end of the sixteenth century was the heyday of the Hapsburgs, and Bohemia was their playground. This was the meeting place of east and west Europe: decadent, degenerate, full of seething changes and gullible gallivants, epitomized in Rudolph II of Bohemia (and Hungary, Austria and the Holy Roman Empire, though not all at once). It had courtsful of contemporary drop-outs, printing houses (underground or otherwise), secret societies, brotherhoods, Mannerist artists and alchemists; in fact all the paradoxes of power and pretentiousness. See also Family of Love; Palatinate; Rudolph II.

Bombastus

Long thought to be Paracelsus's self-mocking nickname, this is actually a corruption, still tongue-in-cheek no doubt, of Baumast, his father's patronymic.

Booz, Adam

This German translator added a curious contribution to the text of Fludd's *Tractatus Apologeticus* in 1782 on the subject of Palingenesis, the art of recreating or reviving dead things:

Palingenesis had been discovered and made known by the naturalist Buoss in Aura. It is



explained that by means of a magnetic electrum the rays of the sun and moon are drawn out of a viscous water and thus it becomes crystalline. There is nothing added, but in the space of four weeks, wonderful starry flowers grow up herein. These flowers can be resolved again into water by a little aqua de nubibus and can be passed through blotting paper. But in the space of another four weeks the flowers will be produced once more, reassuming their former shapes. When the sun shines they diffuse such a radiance that the eye cannot support it!

Booz adds that an experiment of this kind took place on 28 May 1776 before many noble persons.

Böttger, Johann Friedrich (1682–1719)

In 1710, this alchemist invented Dresden china from the rich Saxon clay on the banks of the Elbe, as a distraction from his search for gold.

Boyle, Robert (b. 25 January 1627, Ireland; d. 30 December 1691, London)

Not only was Boyle the first chemist to collect a gas, to prepare phosphorus (from urine) and to discover that sound could not be heard across a vacuum, he also initiated a practical alchemy, based on reporting and logging all experiments.

He believed in the transmutation of gold, and helped to persuade the Government to repeal the law against manufacturing gold. He felt they should take advantage of any gold, however it was made.

In 1661 Boyle published *The Sceptical Chemist*, which examines the great mystique of the four elements and postulates that elements are material substances able to be identified by experiment. Further, compound elements could be obtained by combining simple ones.

Boyle had become devoutly religious in his twenties. This seems to have been prompted in his youth by a violent thunderstorm that made him cower in fear and vow godliness

thenceforth.

Already a child scholar in Greek, Latin, Philosophy and Science, by his forties he was adding Hebrew and Aramaic, and starting missionary projects in China.

From 1654, in Oxford, Boyle partook in secret experimental workshops, of the sort inspired by Francis Bacon and maintained in exile by Samuel Hartlib, John Dury and Comenius, Utopian refugees. These workshops developed into 'our Invisible College', as Boyle describes in various letters, and appeared to be associated with the Rosicrucians and Freemasons, the work undertaken there being more akin to philosophical alchemy than just laboratory chemistry. The meetings were conducted by John Wilkins in his rooms at Wadham College, Oxford, and from these meetings the Royal Society arose. When Boyle was invited in 1680 to be President, he declined as he disagreed with the induction method.

Brahe, Tycho (b. 14 December 1546, Denmark; d. 24 October 1601, Prague)

A cranky, costume-obsessed, noseless astronomer-chemist, caught up in the weird world of Rudolph II and his minions, Maier and Kepler. Tycho was entangled in the trappings of occultist courts, from Frederick II's in Denmark to those of Rudolph II and Peter Vok in Bohemia, where, it is told, he partook of a last fatal banquet and his bladder burst!

Occurrences in the heavens over his lifetime gave cause for Tycho to alter his path quite radically. The first heavenly event was an eclipse of the sun in 1560, which prompted the fourteen-year-old Tycho at Copenhagen University to change his studies from Politics to Astronomy and Mathematics.

In 1563 Tycho observed a conjunction of Saturn and Jupiter, but realized it was a month awry according to the Alfonsine Tables in current use. So he started to prepare new tables with new instruments. He whittled away a few years dabbling in alchemy and casting



Brahe, Tycho



Tycho Brahe, with tin nose (recently attested).

horoscopes. He began to acquire a reputation as an astrologer. This 'phoenix of astronomy' studied sunspots, and in 1564, aged eighteen, had designed a huge solar mirror able to help make alloys of precious stones. His patron, the King of Denmark, Frederick II, lashed out on a fantasy of an observatory at Ven (an island between Denmark and Sweden) for Tycho to persuade him not to emigrate to the German states where astronomy was actively sponsored.

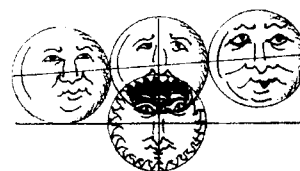
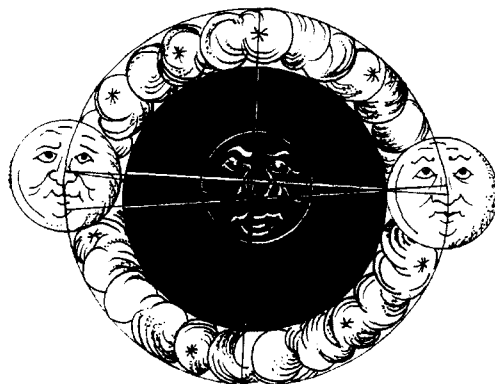
In 1572 Tycho, the last of the naked-eye astronomers, sited an exploding star to the north-west of Cassiopoeia, and wrote about his findings in a 52-page pamphlet, *De Nova Stella*. He struck a blow to the faithful followers of Aristotle who still believed in the fixed heavens beyond the sphere of the moon. Tycho had actually predicted the appearance of this nova out of the black sky, and lo and behold, to the amazement of the gathered stargazers, it did appear from its pin-prick to burst forth and shine brighter than Venus for over a year. Not least impressed was Frederick

the king, who rather hoped that Tycho had discovered the art of creating gold out of base metals, not just a star out of a black sky.

The comet of 1577 proved to Tycho that this object was also further away than the moon, with a very odd orbit, out of harmony with the regular circuits of the planets. He tried to compromise in his theory that all the planets *except the Earth* revolved about the sun, but that the sun itself, with satellite planets, revolved about the Earth. Apart from these half-hearted theories, Tycho had gimlet eyesight, even sharper than the ancient Ptolemy's, and he corrected all the previously charted stars and planetary tables of motion.

Tycho's observatory at Ven was finished in 1580, by which time he had set himself up as something of an alchemist-cum-scriver, complete with crystal ball 1.5 metres (5ft) in diameter. He was visited by the rich and the odd, including James VI of Scotland (later I of England) in 1590 when James came to

Eichstadt's *Ephemeridum* (Stettin, 1639) showing eclipses. Eichstadt had worked in Brahe's observatory, the Uraniborg, on the island of Ven.





Denmark to marry a Danish Princess. James had a superstitious appetite for horoscopes and the occult even though he pretended to denounce this in his *Daemonologie*.

Treated like a prince in his ivory tower until Frederick's death in 1588, Tycho was booted out, court-dress, tin nose and all, by the next monarch, Christian IV, who had a temper to match Tycho's own. Into the morass of mid-Europe went Tycho, hijacked by Hajek, Imperial Physician to Rudolph II, to settle in the crazy courts of Bohemia and become Imperial Astronomer. He finally handed over his instruments and his planetary data, lock, stock and barrel, to his crippled visionary successor, Kepler, in 1601. Sadly, Tycho's painstakingly made equipment was never used again. Within a few years Galileo's telescope made it all obsolete, and it was destroyed in the fires of the Thirty Years' War. See also Rudolph II.

Bruno, Giordano (1548–1600)

Il Nolano of Brecht's *The Heretic's Coat*, Bruno was the philosopher who refused to recant, so was burned at the stake by his fellows in 1600. Like his spiritual master, Nicholas of Cusa, he preached that space was infinite and the Earth moved around the sun, in a universe in which man was a part equal to other parts. Unlike the canny Cusa or Galileo, Bruno did not escape punishment, for he refused to eat humble pie and poured scorn on the Establishment. In the Dominican monastery where he trained, after the University of Naples, he imbibed the Dominican system of memorizing.

This was not merely a way to improve one's memory in an age where very little was written down, nor simply memory-jogging exercises by recalling pictures in the mind; for Bruno it was more a way of recreating worlds in the mind, through the power of the imagination that was so vivid that the imagination took on a life of its own, and the images took on talismanic powers that could influence the real world. Today it is fairly easy to recognize all this as 'guided visualization' and other forms of

esoteric training of the mind. The very expression 'to conjure up images' holds neither the force nor fear for us as it did for orthodox sixteenth-century monks. Bruno found that his ideas on memory, and his overturning of accepted religious opinions on God, Adam, Christ and the Trinity, had gone too far for his Order, so he sped around Europe for support of his memory system, *De Umbris* (Shadows).

In fact, his memory wheel and system of power-incantations has much in common with the alchemists Ramon Lull, Cornelius Agrippa and Trithemius. He envisages a form of spiritual alchemy whereby everything in the universe – stars, planets, creatures – can be transformed by association with other beings in the imagination on a transcending ladder, with the star-worlds as intermediaries. His interpretation is more Hermetic than Christian, his ideas and 'shadows' are more magical than angelic.

At Oxford, Bruno's debates were inspired by the appearance of the Polish prince, Albrecht Laski, who was visiting Queen Elizabeth I. Bruno derided the 'idiotic showing' of the University 'pedants', although he got on well with Sir Philip Sidney and chivalric Elizabethan poetry. Sidney, moreover, was receptive to Bruno's magical mnemonics and allowed Bruno's disciple, Dicson, to attend him. Eventually, Bruno ended up in Bohemia, having 'done' the alchemical circuit. He dedicated a book to Rudolph II and met Michael Maier, who incorporated into his own books some of Bruno's imagery that was alchemical, particularly the images of 'Chymia, the all-wise Hermes, King of Egypt'.

Finally inquisition spies caught up with Bruno. The Hapsburg-Jesuit alliance persecuted the Rosicrucians and Hermetic alchemists in whatever country they could. Bruno was lured to Venice by one Zuan Mocenigo, 'who wished', said Bruno at his Inquisition, 'that I should teach him the art of memory'. Once in Venice, Bruno was handed over by that Judas to the Inquisitors, and after a seven-year trial was burned at the stake for his heresies about



Buch zu Distillieren

shadows of ideas, his interpretations of images in the mind. Had Jung been alive then, he would have welcomed Bruno. Imagine Jung being burned at the stake! See also Inquisition; Nicholas of Cusa; Papyrus; Stake.

Buch zu Distillieren

A sober, constructive book, by Hieronymus Brunschwick, which puts alchemical processes to use, rising out of the chaotic mass of writings of the medieval alchemists searching for magical elixirs. It is a kind of early herbal, printed at Strasburg in 1519 by Johann Grüninger in 330 folio sheets of double-columned Gothic print, bound in pigskin, richly tooled, with brass bosses and clasps. The recipes and remedies are precise and practical. For instance, to prepare a remedy for the palsy which is not costly:

Take of parsley seed, six lots;
of wormwood that is green, two good
handfuls;
of distilled wine, six lots;
pound it all together, and distil it in an
alembic or in an ordinary Rosenhut, as
shown here.
And of water, drink ii [i.e. two] spoonfuls
every morning, fasting.
Rub the limbs with it every morning, noon
and night, and let it dry in.

Burton, Robert (1577–1640)

This clerical recluse of Christ Church, Oxford, was an armchair knight-errant. He hoarded into his *Anatomy of Melancholy* a lifetime of firmly opinionated fact and fiction. By ingenious means, Burton collected many Rosicrucian and alchemical books, including Vaughan's *Golden Fleece*, Boccalini's *Ragguagli di Parnaso*, the *Rosea Crux F.R.C. Fama e Scanzia redux bisvati* of 1618 and Ben

Jonson's masque on the Rosicrucians, *The Fortunate Isles*.

Byzantine Alchemy

Essentially Greek alchemy after it decamped from Alexandria to Byzantium (Constantinople) in Asia Minor in 292AD, following the Decree of Diocletian. So Byzantium was the stepping-stone between Alexandria (Greek alchemy) and Baghdad (Arabian alchemy) where persecuted 'alternatives' like magic, Gnosticism and alchemy continued. The most famous Byzantine alchemists were Enneas of Gaza, Stephanos of Alexandria, Zosimos, Ostanos, Olympiodoros, Pelagius, Synesius and Heliodoros. 'Byzantine' is often used synonymously with 'Alexandrine' or 'Greek', but strictly is later than Alexandrine. See also Copts; Nestorians; Syriac; Zosimos.



Robert Burton, who said: 'The stars do incline but not compeat.'



Cabala

The 'Secret Tradition', one of the esoteric paths closely associated with alchemy. There are three sources of cabala: the Talmud; Geonic mysticism of the exiled Jews in Babylonia; and Arabic Neoplatonism (i.e. Plato as interpreted by his great disciples, particularly the Arabians of Baghdad and Spain).

'Cabala', spelt in the Spanish way, is an example of the cunning punning in which alchemy abounds. By the Middle Ages, cabala involved the Brotherhood of Knights, the Cabalerie, Chivalry, the Knights Templar. Horsemen of the 'Cavale' (secret wisdom) were also Horsemen of the 'Cabale' (the Knight's sword that tests the Stone, as King Arthur's did). See also Kabbalah; Qabalah.

Cabalistic signs

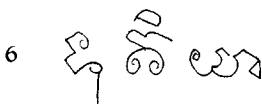
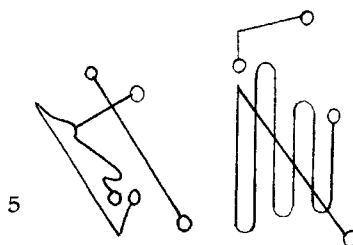
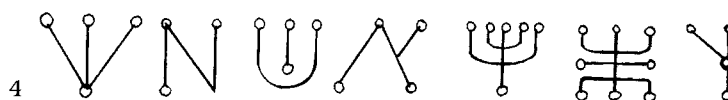
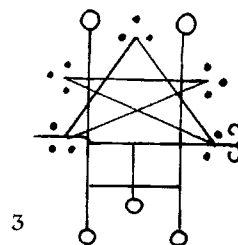
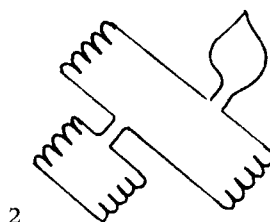
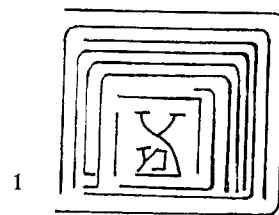
Just as alchemy has its signs for the basic elements – sulphur, quicksilver, fire, water and so on – so it also has its metaphysical equivalents: Philosophic Mercury, Salt, Gold. Moreover, a whole array of secret languages and magic signs exist alongside and overlap the alchemical-cabalistic borders.

Cabiri

'Theurgic priests of fires – not a very enlightening definition for this caste of 'sacred smiths' associated with metal-working and digging for alchemical gold deep in the mines of the Aegean Isle of Samothrace, where Jason and the Argonauts, Pythagoras and Orpheus, were initiated into the Greek mysteries. The secrets of these underground dwarf-gods seem to have passed through Alexandria and Byzantium to the Arabs, thence west via Spain, the babbleground of alchemy, old and new.

Some say that the Cabiri were the Great Gods, and numbered eight brothers altogether.

Apparently, seven of these eight Cabiri, sons of Sydyk, set down their memoirs; then their eighth brother Æsclepius (or Esmuu 'The Eighth') did so too, as the God Taautus (or Thoth, Hermes) commanded him. Thus was the origin of the famed alchemical-Hermetic text known as the *Æsclepius*. See also Æsclepius; Hermes; Thoth.



Cabalistic signs:

- 1 Diagram of the world formed from initial letters of any given sephirotic sequence.
- 2 Aleph, the first letter of the alphabet, spiritual root of all harmony.
- 3 Text on scroll found near the Dead Sea showing magical signs of a Jewish sect (first century AD) similar to medieval diagrams.
- 4 Cabalistic script with rounded-off end-strokes.
- 5 Magical sign from Cornelius Agrippa's *Occulta Philosophia*.
- 6 Modern Cambodian script, which, along with other Asiatic scripts, shows the same characteristics as cabalistic alphabets of strengthened end roundels.



Caduceus

Caduceus

The symbol of Mercury, the caduceus, is two serpents entwined around a central rod. In *De Re Metallica* (Basel, 1556) Agricola describes how:

The ancients, by means of the divining-rod, not only procured those things necessary for a livelihood or for luxury, but they were also able to alter the forms of things by it; as when the magicians changed the rods of the Egyptians into serpents as the writings of the Hebrews relate; and as in Homer, Minerva with a divining-rod turned the aged Ulysses suddenly into a youth, and then restored him back again into old age; Circe, also changed Ulysses' companions into beasts, but afterward gave them back again their human form; moreover by his rod, which was called 'Caduceus', Mercury gave sleep to watchmen and awoke slumberers.

De Re Metallica, Agricola (Basel, 1556)

This rod, as a symbol of transforming alchemizing power, has been depicted at least as far back as 2600bc when it is engraved on the sacrificial cup to King Gudea of Lagash, Sumeria. It is found in India on stone tablets, in Egypt and in Mesopotamia.

Under the ancient Greeks, the caduceus became a very sophisticated instrument in the hands of Mercury (Hermes). According to legend, Mercury, the messenger of the Gods, intervened in a fight between two serpents who then curled themselves round his wand. Hence the caduceus as a rod intertwined by two serpents, bound at the base by their tails and facing each other at the top, developed in alchemical symbolism as the polarity between the one (male, the rod) and the dual (female, the split serpents) that combine at each end. Parallel to this, the male represents Being, Fixed, Fire or Sulphur, Sex; while the female represents Becoming, Volatile, Water or Mercury, Spirit.

Visually, the little wings that the caduceus

sprouted in Greek times show the volatility and bisexuality of Mercury, spanning the male-female worlds that have to be sublimated in the alchemical processes towards the unity. See also Hermaphrodite; Hermes; Mercury; Uroboros.

Cagliostro, Count Alessandro of (1743-95)

An eighteenth-century megalomaniac conman in the showbiz of alchemy. Giuseppe Balsamo

Marie Antoinette, Queen of France, wife of Louis XVI, en route to the guillotine in 1793, as predicted by Cagliostro.



(his real name) was educated at the convent of Caltagirone, after which he practised medicine through his powers of suggestiveness, his legendary high jinks matched by his legendary charm.

He had a flock of 'doves', as he called his girl mediums, who answered from behind a screen questions on the occult and the unknown. Caught up in the French Revolution, Cagliostro prophesied the fate of Marie

Antoinette, and the London lottery numbers for 1776. He was interested in his image and belonged to a masonic lodge (freemasons). In alchemy he performed, according to his fans, the Great Work many times, and in Warsaw got Prince Adam Poniaszky to finance him through many spectacular Operations on the alchemistical egg.

Princes and prelates from all over Europe and the Middle East sang his praises. He and his beautiful wife formed twin masonic 'Egyptian' cults, until she finally turned accuser and had her husband arrested for charlatanism. Some say the convulsions that Cagliostro suffered in prison were because he was epileptic rather than visionary.

Calcination

The first main alchemical Operation. The substance to be purified alchemically in a furnace was heated and reduced to fine powder, usually with a change of composition. But gold, when heated to a powder (calx of gold) remained a metal, whereas lead heated in air converted into a yellowish-brown powder that was not metallic (i.e. calx of lead is actually lead oxide).

Many different types of furnace were used for calcining. The principle fuel was charcoal although anything burnable was used: wood, peat, dung. Gauging the temperature was difficult, but slow-burning fuels, such as dung, were preferred because they could be controlled more easily.

An early Greek tract, *The Eight Tombs*, with its promise of allegorical vaults and Egyptian initiation, turns out to be merely a complicated manual on calcination. See also Pernety.

Calendarium

A form of mobile calendar that is often inscribed in a circular band on astrolabes and was used by alchemists and medieval astrologers to measure the positions of the stars. See also Alfonso X.

Caliph

A Muslim chief civil and religious ruler. Over the Islamic world during Europe's Dark Ages there have been some surprisingly enlightened caliphs, under whom alchemy has flourished. Most noteworthy are: the Abbasid Caliph Harun ar-Rashid, who founded the first hospital in Baghdad early in the ninth century; the Abbasid Caliph Al Ma'amun of Baghdad (ruled 813–833), who founded his House of Wisdom; the Fatimid Caliph al-Hakim, who founded the House of Science in Cairo in 995; and the Umayyad Caliphs of Spain, Abd al-Rahman III (912–961) and his son Al-Hakam II (961–976). See Arabic; Baghdad; Damascus.

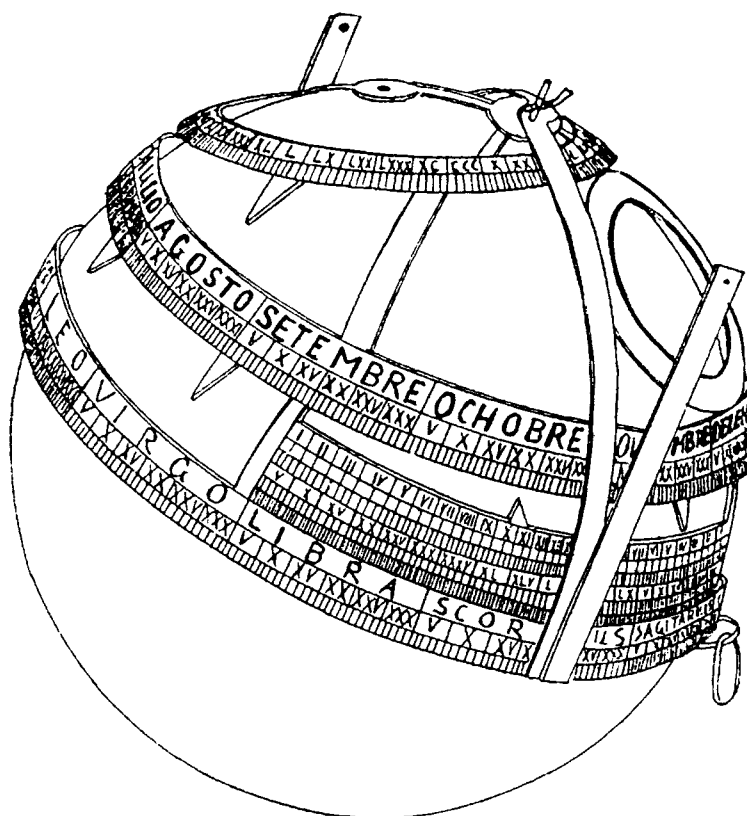
Calx

Powdered or calcinated metal. See also Calcination.

Calx



Alfonso X's spherical astrolabe, showing calendarium in Castilian, various quadrants and zodiacal circle.





Campanella, Tommaso

Campanella, Tommaso (1568–1639)

A visionary among alchemists, along with Postel and Giordano Bruno – and yet, unlike those two – a political realist, who actually understood that black sheep Machiavelli, while rejecting his irreligious cast of mind. Campanella turned to natural theology for the basis of all political power; he believed that a natural apocalypse would cleanse the world of evils and institute change. His *Citta del Sole* (City of the Sun) anticipates Andreae's *Christianopolis* and other Rosicrucian Golden Cities. When, in 1600, Campanella led a revolution in south Italy against the Spanish occupation there, the Establishment considered this monk a shaky character, with allegiances more catholic than Catholic, so they held him in close confinement for the next 35 or so years – a fate not uncommon among heretics.

Even while he was being captured and tortured in Naples, his fellow ex-Dominican friar, Bruno, was being burned at the stake in Rome. It was during his Neapolitan castle imprisonment that Campanella wrote his *Citta del Sole* in about 1602, a Utopia run by Hermetic priests schooled in benevolent alchemical magic. This extraordinary book owes much to Bruno's *De Umbris* and *Images*, which explore the subconscious and how the mind learns and can receive higher sources of energy; in modern terms to reach enlightenment, perhaps. Campanella's City is architecturally circular, with a round Sun Temple at its centre (resembling a Mayan or Egyptian Sun City, or even Baghdad, designed in 763 by the great Abbasid Caliph Al-Mansur). Around its concentric walls are depicted absolutely everything known: all mathematical figures, all human inventions, all animals, birds, vegetation and minerals. Circling the outermost walls are statues of heroes.

Obviously, this Utopia is more than just an ideal city in the politico-economic sense, like Thomas More's; or even in the Christian spiritual sense, like St Augustine's City of God.

It appears to be both a repository of

knowledge and a psychic process of learning: it is a transformational alchemizing of the self, via the Hermetic priests who run the city. These priests are themselves servants of Hermes Trismegistus, the patron, in this case, of occult memory (perhaps we would say the collective unconscious). It parallels more the Egyptian Heliopolis than Utopia. In shape, it would be a three-dimensional mandala or a sacred stone circle, with the Pythagorean properties of a sphere in sacred geometry, where everyone who was living within the concentric circles of houses would be on a permanent 'high' of cosmic influences which they caught in the vast vortex.

Canseliet, Eugene

A modern practising French alchemist and student of Fulcanelli, who writes only about what he has experience of in the practical laboratory: 'No author does more harm than he who discusses alchemical operations of which he has carried out not even the simplest one.'

Of Canseliet's five contemplative, mystical yet pertinent books, *L'Alchimie expliquée sur les Textes Classiques* is the most intriguing. It not only explores the 'dry path' of Maier, Nicholas Flamel and Zacheire, but that of lesser known alchemists, Bernard of Trevisa and Christina of Sweden. He makes short shrift of those who don't really understand the alchemical process, even Jung, no less, whose 'psychological acrobatics' he scorns.

Canseliet ruminates and grazes over many pastures, particularly the Hermetic language of alchemy: the puns, the false etymologies and anagrams. In this way he explores Swift's Gulliver, Cervantes' Don Quixote, Rabelais' Gargantua, all strange giant seekers of the Hermetic path; curiously, all full of tongue-in-cheek wit. Likewise, Canseliet perorates on the alchemical substrata of Cabala: Cheval, Chivalry, Knights-errant, Knights Templar, with all their punning palimpsests, subliminal yet sublime!



Casaubon, Isaac (1559–1614)

A distinguished philological scholar on the one hand, but also a snappy Swiss Protestant critic who saw it his mission to disprove the early dating of the *Corpus Hermeticum*. This was the body of alchemico-magical texts that up till then (1614) had been thought to come direct from Hermes Trismegistus in distant pre-history in Egypt. Casaubon, the kill-joy Christian, did not want any Egyptophilia creeping into his theory that the texts were post-Christian, so he cooked up evidence that the *Hermetic Hymns* were akin to the *Psalms* and that many ideas had been borrowed from Plato's *Timaeus*, and not vice versa.

Thus Casaubon stunned the occult world but did not destroy its faith in the Hermetic Texts. At that point he had not heard of the recently discovered papyri from the third century BC at Esna in Upper Egypt referring to Dhwtj < 3 < 3 < 3 (Thoth Thrice Greatest), implying that worshipping Hermes goes back many centuries BC. See also Esclepius.

Casaubon, Meric (1599–1671)

The son of Isaac. As distasteful debunker as his father, but this time of John Dee, whose work he edited, or more likely edited out, in 1659. Casaulson deemed Dee's diaries of conversations with Angels to be 'A work of Darkness' (i.e. Edgar Cayce-type seances). He appeared to think that Dee was in their clutches, as 'Fauste' was in the clutches of Mephistopheles. Nonetheless, the outraged Casaubon said he was publishing the work 'not to satisfy curiosity, but to do good and promote Religion'. The abridged title is *A True & Faithful Relation of What passed for many Yeers Between Dr. John Dee and Some Spirits*.

Catholicon

The elixir of life and panacea, ensuring prolongation or perpetuity of existence.

Celestial Agriculture

Throughout the Renaissance alchemy was called this, while its adepts were called labourers. 'Laborare et orare' (work and pray) was a famous alchemical motto.

The text known as *Celestial Agriculture* by Paulus Riccius, Johann Reuchlin's contemporary and Jewish convert to Christianity, heads the *Artis Cabalisticæ* (Basel, 1587), which the fringe-cabalist Pistorius collected 'as a counterblast to the superstitions which the Kabbalah had promoted in Christendom'. See also Waite.

Chakra (plural Chakram)

The unseen points on the meridians of the human body that correspond with, but are not the same as, the parasympathetic nervous system (nerve nodes).

All esoteric schools recognize their existence: the ancient *Nei Ching* (The Yellow Emperor's Book of Medicine), modern oriental acupuncture, ayurvedic healing, alchemical arts – all holistic medicine relies on the responses of the chakram.

Chalcidius

A fourth-century Neoplatonist who wrote famed commentaries on Plato's *Timaeus*. The Elizabethan magus, John Dee, owned at least four copies of the *Timaeus with Chalcidius' Commentaries*, a work that inspired Renaissance alchemists. Chalcidius's Latin version helped the *Timaeus* to survive in the Middle Ages. It was very popular in medieval libraries as it concerned rationalizing Creation, the first attempts at a scientific cosmology.

Chalcis

Syrian city near Aleppo; the birthplace of Iamblichus, the fourth-century Pythagorean alchemist. Chalcis was later the home of St Jerome.



Chaldean

Chaldean

A Greek synonym for 'Babylonian', which is cognate with the Assyrian place-name 'Kaidu', which was part of, not the whole of, Babylonia. Not until Nabopolassar (c. 626BC), himself a Chaldean, founded the new kingdom of Babylonia did come to Chaldea signify Babylon.

In the Book of Daniel I.4, 'Chaldean' is used to mean a caste of wise men, so the Chaldeans came to mean an élite group of seers, prophets, alchemists and astrologers, especially after the geographical Babylonia had been conquered by the Persians.

Throughout the early Christian era, the Neoplatonists Plotinus, Porphyry, Proclus and Iamblichus, up to Psellos in the eleventh century, all set high store by the Chaldeans and wrote treatises on the Chaldean Oracles and Philosophy. Renaissance alchemists dwelt particularly on the Chaldean belief that the heavens influenced the earth and were capable of producing strange effects on the lower spheres of being; and that the stars, planets, elements and metals all interconnected with man.

Chaldean magic

The generic term for the highest esoteric knowledge of the Babylonian type. The Chaldean name 'Maghdim' meant 'supreme wisdom', so in time the whole expression came to mean the distilled sacred knowledge of the sages of India, Persia, Babylonia and Egypt.

Many Greek and Byzantine alchemists believed that their philosophy started among the 'Barbarians' in Egypt and in Babylon. Democritus (c. 460 – c. 370BC) is one of the early Greek philosophers who is said to have travelled around Egypt, Persia and the Red Sea, and to have written *On the Sacred Writings in Babylon* and *A Chaldean Account* some time in the fifth century BC.

Chalybs

Steel, after the Chalybes, workers of iron, a people of Pontus, on the south side of the Black Sea.

Chaotic water

Mercury, also known as Abysmal water, Sylvery water and Philosophical Basilisk.

Chariot

Before the word came into use in medieval Spain, this meant Cabala. 'Chariot' is from Ezekiel's vision of going up the levels of consciousness from footstool, to chariot, to throne and to heavenly halls. See also Arbatel; Yorede Merkabah.

Charles XII, King of Sweden (1682–1718)

'The Lion of the North' (reigned 1697–1718) employed one General Payköl, alchemist, on his general payroll.

Charnock, Thomas (1524–81)

An English alchemist and contemporary of John Dee and Edward Kelley, who was mentioned in Ashmole's *Theatrum Chemicum Britannicum*. Charnock worked as a laboratory assistant to discover the secret of the Philosopher's Stone. He once noted that he had repeated one alchemical Operation 476 times and hoped to continue to the five-hundredth. This was in keeping with the widely-held belief that the more an alchemical Work was repeated, the more refined the substance became, as did the alchemist, until finally he reached perfection.

Charnock was press-ganged into service in Queen Mary's army at Calais, but he apparently wrecked his laboratory first because he was so furious at having to leave it. He wrote a book in verse, on alchemy, which he dedicated to



Lord Burghley, a surreptitious alchemist and friend of John Dee.

Chartres

Alchemically a giant goetic dolmen for spiritual transformation (along with other Gothic cathedrals) built by the Knights Templar after initiation by St Bernard of Clairvaux.

The cathedral suffered 13 conflagrations in 350 years since its founding in the year 1000. It was dedicated on 8 September in that year, with 8 September being celebrated as Mary, the Mother of Jesus' birthday. The great Fulbertus who founded the cathedral had built a cluster of small houses and classrooms around the cathedral. Three or four years after the dedication, at the annual celebration, lightning struck the wooden steeple of Chartres and everything went up in flames, classrooms and all. See also Dolmen; Goetic.

Chaucer, Geoffrey (1340–1400)

Poet, diplomat, Controller of the Customs and writer of *The Canterbury Tales*.

Of Chaucer's many references to alchemists – Avicenna, Averroes, Galen, Rhazes and the like – the most popular are the characters in 'The Canon's Yeoman's Tale', which pulls apart the grand concept of alchemy in a brilliant satire.

Chemical combination

Defined by Aristotle as 'a union of seven bodies, capable of such combination involving a transformation of the properties of the bodies combined'.

This definition, summing up Aristotle's most important achievement and the basis of practical alchemy, comes from Book IV of the *Meteorology*, a programme of research into the nature of various substances with a view to classifying them according to how they could or could not be acted upon.

Chemical Theatre, The

A modern study by Charles Nicholl of alchemical themes in humanist literature (Routledge & Kegan Paul, 1980).

Chemical wedding

Relationships that culminate in alchemical weddings are the stuff of the allegories of alchemy! They refer (usually) to the joining or 'conjunctio' of Philosophic Mercury and Sulphur (purified Silver and Gold) in the final stages of the Operation.

The most famous wedding in alchemical literature is *The Chymical Wedding of Christian Rosencreutz* by J.V. Andreae, the Rosicrucian (Strasburg, 1616). This seven-day dream-journey, which the reader undertakes with Christian Rosencreutz, leads not only to the perfected alchemical wedding that he observes but also to an alchemical bird that is created in a laboratory.

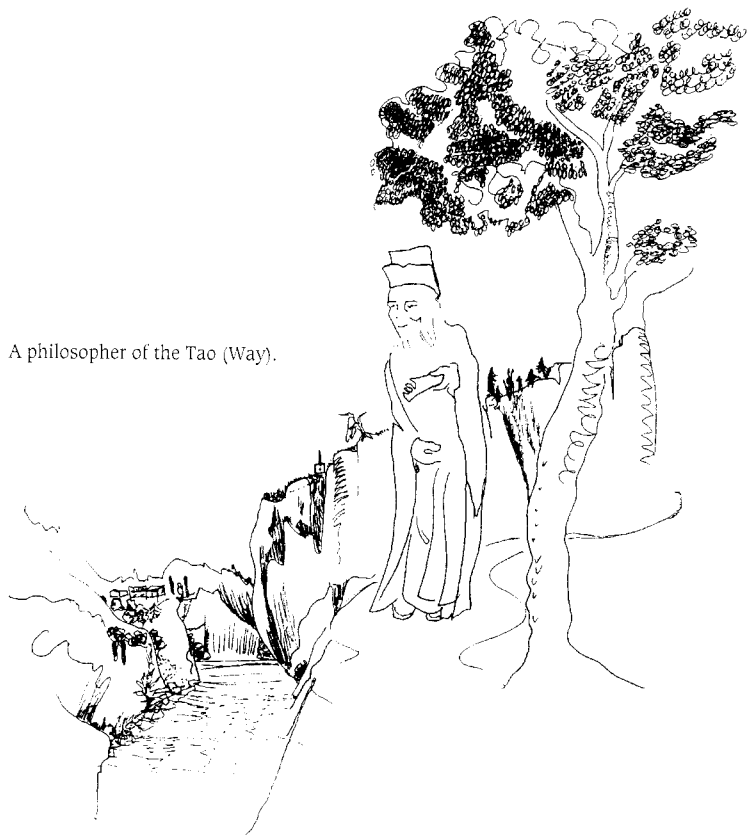
Some say that the wedding in the allegory also celebrates the actual wedding in 1613 of Frederick V of the Palatinate and Princess Elizabeth (daughter of James I), upon which New Agers so pinned their hopes of a marvellous merger of Rhine and Thames into a Eurostream of enlightenment. All dreams of this great stream of consciousness were drowned in the hideous deluge of the Thirty Years' War. See also Andreae; Palatinate.

Chen

The original life that breaks out of the depths of the earth, the beginning of all movement, according to Chinese alchemy. In the *I Ching*, chen is the trigram 'Thunder', the 'Arousing', the beginning of the alchemical Great Work. On its own, though, the beginning is not enough. In the esoteric handbook on meditation, the seventeenth-century *T'ai I Ch'in Hua Tsung Chih*, is the warning: 'But when the practice is started one must press on from the obvious to the profound, from the coarse to the fine.'



Chinese alchemy



A philosopher of the Tao (Way).

Chinese alchemy

Known in China as the Hermetic Art of the Celestial Empire and dating back at least to the fourth century BC where it is linked with Taoism. Chinese alchemy embodies the idea of 'change', transformation from one thing to its opposite, from Yin to Yang. Some say it dates back to 1000BC, to the *Shu Ching* book of history, the oldest of the Chinese Classics, which expounds the Yin-Yang doctrine of the five stages of change.

The first aim of oriental alchemy was to achieve longevity via the Elixir of Life. This was a noble aim: it could lead to immortality. The second was gold-making, a commercial aim: this was despised.

In China the first practitioner of alchemy is believed to have been Dzou Yen of the fourth

century BC, who wrote two recipe books on gold-making: *The Great Treasure* and *The Secrets of the Park*. He was a wonder-worker, esteemed by kings and nobles who professed to know what occult virtue should be studied in order for a state to prosper. Gold-making certainly prospered. According to one commentator in AD180, the Emperor Wen in 175BC had allowed alchemical gold to be made, and by 144BC people were profiting by it, to the extent that the Emperor Jing (Ching) issued an imperial edict decreeing that those who made counterfeit gold should be punished by public execution. Apparently, when these alchemical opportunists had used up all their means on their experiments, they turned to robbery and an early form of hijacking or hold-up.

Alchemy was obviously not eliminated during that time. In 133BC, Li Chao Kiun, an alchemist, was received by Emperor Wu Ti because he claimed that by worshipping the Goddess of the Stove he had discovered the secret of eternal life, which would enable the emperor to hear the immortals of Peng-lai who lived beneath the ocean. The Goddess of the Stove was a 'beautiful old woman clad in red garments with her hair done up in a knot on the top of her head'. She was the Divinity of Cooking and Brewing medicines and Alchemy. In some versions of the legend she was also known as the Goddess of the Furnace (Tsao), to whom the alchemist persuades Emperor Wu Ti to sacrifice:

... for you shall have the power to summon supernatural beings. When you have made these beings appear, cinnabar powder can be transmuted into yellow gold; when the yellow gold has been produced you can make eating and drinking utensils from it. Thereafter, you shall have great longevity, and you shall see the Blessed (hsien) of the Isle of P'ong-lai, which is in the middle of the sea.

Cinnabar in the course of combustion broke down into mercury, which symbolized the



mystery of regeneration through death. This passion for immortality led to untold deaths among alchemists; many popped off after being poisoned by 'potable gold', Divine Cinnabar, the Golden Elixir of long life. In about 60BC Liu Hsiang conducted experiments on immortality for the Emperor Suan. They were spectacular fiascos, for which Liu was sentenced to death, then unsentenced when his brother offered a substantial ransom! Divine Cinnabar, *aurum potable*, appears in some texts to be a physical substance, whereas in others, especially Taoist texts, it appears as a symbol of the spiritual state no longer bound by Time. A distinction was made between the 'wai tan' or exoteric path, and the 'nei tan' or esoteric path.

By the second century AD experimenters in the alchemical art were dying in multitudes, through imbibing quantities of this or that metal or mineral; not only cinnabar but particularly gold and jade, which in liquid form were said to protect the body from corruption.

However, Wei Po-Yang in a text of AD 142 writes: 'By nature, gold is not harmful.' The manufacture of gold was seen as an alchemical act at a human level rather than a natural act at a purely mineral level. To produce the Philosophic Stone was considered not so much technical as procreative and the relationship between man and gold was largely mystical.

Between the second and third centuries AD a document appeared called the *Tsan-tung-chi*, concerning the 'Three Similars': star-shaped hexagons, alchemy and Taoist philosophy. About the same time the greatest and most colourful of alchemists flourished: Go-Hung, known as Pao-Pou Tseu or Old Sober-Sides. He rescued the reputation of alchemy as a get-rich-quick path, and in his *Nuy pe-en* (Treatise on the Inner Chapters) put it in its context of Taoist philosophy: The Path of the Universe.

As Heraclitus, the early Greek philosopher in the West, based the practical principles of elementary chemistry on the prime element of matter, fire, so did Taoism in the East. Moreover, as the Pythagoreans saw the strong relationships between the elements and

number, so did the Taoist alchemists. But their sacred number was five, which they saw in relation to the magic square of numbers 1-9. Upon this rested the theory of Yin and Yang. They built up the practical system of alchemy with the concept of five:

Five directions: North, South, East, West and Centre;

Five elements: Wood, Fire, Earth, Metal and Water;

Five colours: Yellow, Blue, Red, White and Black;

Five metals: Gold, Silver, Lead, Copper and Iron;

Five planets: Mercury, Mars, Jupiter, Venus and Saturn.

Each of the five elements was associated with a certain colour, direction, metal and planet.

Thus, Earth was associated with Yellow, Centre, Gold and Saturn. Wood was associated with Blue, East, Lead and Jupiter. Fire was associated with Red, South, Copper and Mars. Metal was associated with White, West, Silver and Venus. Water was associated with Black, North, Iron and Mercury. Ultimately, there were five stages of change before the alchemical goal of immortality was reached. Gradually, over the centuries, Chinese alchemists spoke more openly about ascetic, contemplative techniques of alchemical transformation, ('nei tan', the Inner Path), and the physical universe of the laboratory experiment ('wai tan', the Outer Path). By the thirteenth century they mostly saw the physical and the metaphysical universe as one, in matter and energy.

Chlorophyll

The green pigment in plants that absorbs energy from the sun. Alchemists early guessing at photosynthesis, knew chlorophyll had something to do with life and growth by means of transforming water with 'something in the air'.

It was not until the alchemist Van Helmont did his experiments with burning wood that



Christopher, St

this 'something' was quantified as 'gas sylvestre' (gas from wood), later to be labelled carbon dioxide. According to Occult Chemistry, one molecule of chlorophyll looks like a dodecahedron. Robert Lawlor in his book on Sacred Geometry draws the analogy between chlorophyll and the Gothic Rose Windows. See also Dodecahedron; Rose Windows; Van Helmont.

Christopher, St

St Christopher has had a strange history. Statues of him in churches were repeatedly destroyed through the centuries, as if he was an anti-Christ instead of a carrier of Christ. In the Chapter of Notre-Dame de Paris, there used to be a great grey-painted statue of St Christopher against the first pillar on the right as one entered the nave. It was erected in 1413 by Antoine des Essarts, King Charles VI's Chamberlain.



St Christopher bearing the Christ-child.

In 1781 the statue was dragged out and hacked to pieces, but only after its namesake Christophe de Beaumont, Archbishop of Paris (who had resisted the destruction of the statue), was dead. There must have been some very powerful reason for the destruction of so many St Christophers. Could it be that the Church knew that the saint's likeness was more than the symbol of the Christ-bearer?

The first meaning of Christopher comes from Christos Offerus, 'he who carries Christ', (Greek *χριστοφορος*) but in cabalistic false etymology, phonetically, Christopher = Chrysopher, 'he who carries gold' (Greek *χρυσοφορος*).

This means that the St Christopher is the hieroglyph for solar sulphur (Jesus), for gold being born(e), raised on the waters of mercury and carried over/transported/transfigured by the energy flow of mercury, over and up to the Elysian fields, the heavenly state of perfection.

Chrysopoeia

The ancient Alexandrian craft of metallurgy and goldsmithy, that later became confused with Christ and crystals and alchemical mumbo-jumbo, as in Nicephoros' thirteenth-century tract *The Chrysopoeia of the Egg*.

Berthelot in his collection of Greek texts, formed during the eighth or ninth century at Constantinople, lists a lexicon of *The Art of Chrysopoeia*, in which various alchemical terms are given chemical definitions: The Seed of Venus is verdigris; Dew is mercury extracted from arsenic; and the Sacred Stone is chrysolite, also known as the Hidden Mystery. Magnesia is identified with white lead, pyrites, crude vinegar and native sulphur of antimony called 'female antimony'. 'The Stone which is not a Stone' is lime and vapour sublimate diluted with vinegar. Regeneration is the process of calcining and washing.

Chrysor

One of two brothers who, in Venetian myth,

were the inventors of iron and the many uses of it. Chrysor had all the attributes of Vulcan, Mercury, and Apollo. The name 'Chrysor' involves an alchemical pun: it contains the Hebrew **חָרָץ**, 'kharats' (sharpening or cutting), with 'chrysor', the Assyrian word for gold.

Chymic choir

The Chymic Choir of the Seven Metals is the first picture after the title page in the alchemical compendium, *Musaeum Hermeticum*, compiled by Lucas Jennis in 1625.

Cinnabar

Natural mercuric sulphide; a bright red crystalline solid; the principal ore of mercury. A favourite prime matter among Chinese and Arabian alchemists, who extracted their mercury from it. The name 'cinnabar' comes from the Persian, meaning 'dragon's blood'. See also Philosophic Mercury, Salt and Sulphur.

Cistercians

A religious order founded in Cîteaux, France, in 1098. The Cistercians handed down the tradition of Sacred Geometry, the 'trait', to the Gothic master-builders of cathedrals. A fraternity of masons had been created at Cîteaux, The Children of Solomon, who were associated with Bernard of Clairvaux's Order of the Temple of Solomon (the complex organization of monks, laymen, soldiers and craftsmen).

It so happened that the two most powerful representatives of spiritual alchemy working through religious institutions, the Cluniacs and the Cistercians, showed its two faces, the fair (the Gothic), and the dark (the Crusades), in equal measure.

Clavis

Written by Jakob Boehme, the *Clavis* or *Key* sums up the mystical alchemist's theosophy. Written in 1624, it is a visionary work about the nature of God and his emanated divine power from which the visible world is created. It reads like a work of divine meditation, reflecting Boehme's deeply devotional lifestyle.

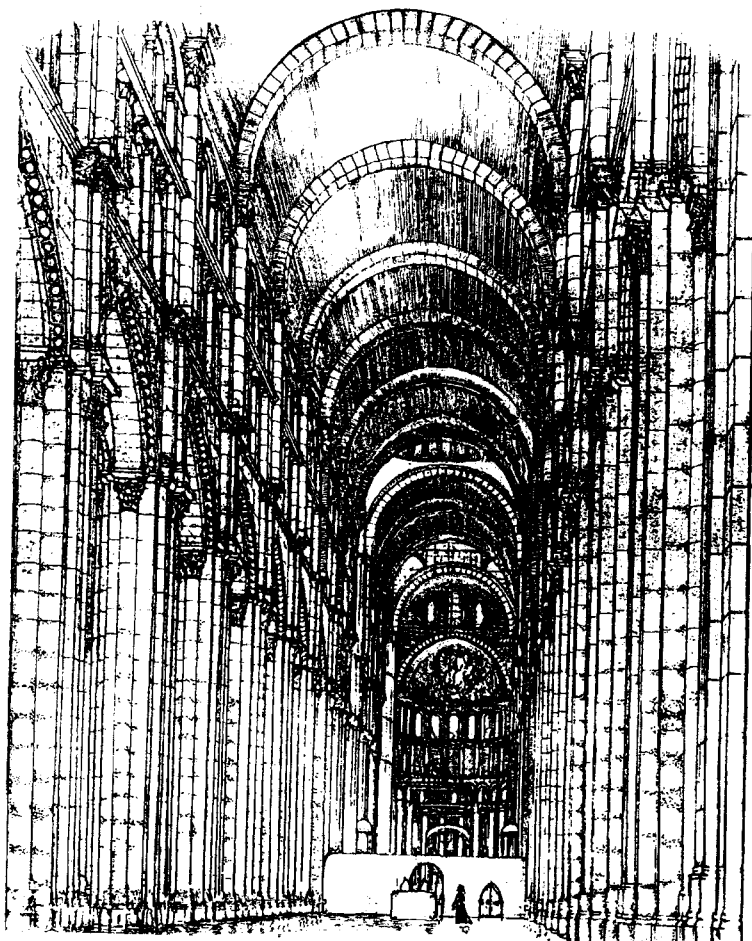
Cluny

It is said that this abbey was founded in Burgundy in 910 by 12 Benedictine monks from Monte Cassino to enable complete autonomy. After the drop of monastic standards in the previous century, Cluny set



Cluny

Cluny. How the new Gothic cathedral might have looked when it was consecrated in 1095.





Coagulation

the most abstemious example of pacifism and sanctity, until suddenly in 1095 two extraordinary things happened there: the First Crusade was launched, and the new Gothic Cathedral was consecrated; it was being built according to the laws of Sacred Geometry by a guild of master craftsmen or freemasons. It is thought that there was a flow of alchemical knowledge between Cluny and the island on Lake Como, which was home to the esoteric brotherhood of the Comacenes.

Odo (tenth century), the first of the two colossi among Cluniac abbots, used to commute over the Alps to Como, an early seeker of the Grail in the face of the banditti and the mercenaries, the carrier of alchemical news on the routes of the rapers of Burgundy, Viking, Muslim and Magyar. There were other raiders, other routes from Cluny, the most solemn being the thousand miles of pilgrimage to Compostella along the alchemical silk road over the Pyrenees.

The second of the colossi of Cluny, Peter the Venerable (c. 1092–1156), was a remarkable visionary, who foresaw a Lull-type art at the abbey where Muslim, Jew and Christian could harmonize their mystic philosophies (provided the Christian ideas were uppermost). In the 1130s and 1140s, Peter underwrote the daring enterprise of translating Muslim religious and alchemical works into Latin, including the Koran, (for which Peter financed the Englishman Robert of Ketton), and of investigating the Talmud with the help of Jewish converts. Bernard of Clairvaux, his friend and arch-rival, did not like this at all. His cousin Robert had defected to Cluny. Bernard scorned its 'dainty coverlets' as 'comfort for the weak', so he waged war against Cluny and converted many monks there, for he was convinced he was right, and he had the backing of Abbot Suger, the great cathedral-builder.

However, Peter the Venerable, in his apology for amassing his multi-faith manuscripts, safeguarded his own Christian interests by replying to Bernard's criticism:

Solomon the Peaceful forged weapons for protection which were not needed in his day. David prepared ornaments for the Temple, although they could not be used in his day ... This work as I see it cannot be called useless.

So Peter organized his team of esoteric translators working between Cluny and centres of learning in Moorish Spain, building up networks of texts in Greek, Latin, Hebrew, Arabic, French and Castilian, for the vast Cluniac Collection (known as the *Cluniac Corpus*). The Cluniac Order spread far and wide: 1,500 monasteries ranged from Portugal to Poland under Abbot Hugh (1089–1130), forming an empire. But somehow a stranglehold undercurrent had been creeping in: the Cluniac Pope Gregory VII's crusading plans (c. 1075), then the Inquisition, followed ultimately by the mobs of the French Revolution who wrecked the great abbey at Cluny almost utterly.

Coagulation

The process of alchemically clotting insoluble materials, particularly used of Mercury in the process of purifying it in the Great Work.

Read what Eirenaeus Philalethes has to say in 'Of the Difficulty and Length of the First Operation', from *The Open Entrance to the Closed Palace of the King* about the difficulties alchemists had with mercury:

Mercury emerged in a hermaphroditic state. Then they placed it in the fire; in no long time they succeeded in coagulating it, and in its coagulation they found the Sun and the Moon in a most pure state. Then they considered that, before its coagulation, this Mercury was not a metal, since, on being volatilized, it left no residue at the bottom of the distilling vessel; hence they called it unmaturing gold and their living (or quick) silver. It also occurred to them that if gold were sown, as it were, in the soil of its own first substance, its excellence would

probably be enhanced, and when they placed gold therein, the fixed was volatized, the hard softened, the coagulated dissolved, to the amazement of nature herself.

The point here is that paradoxes are happening alchemically. Coagulation normally happens to insoluble substances once they are heated to a certain temperature. Having coagulated, they cannot be dissolved by their very nature of being 'insoluble'.

But here we have coagulated Mercury being dissolved! The quotation looks like gibberish, but as Frater Albertus says: 'As is the case with all alchemystical literature, a prolonged contemplation will eventually reveal its true meaning in the plainest manner imaginable.'

In the traditional 12 stages of the operation, coagulation was sometimes the term used instead of congelation or crystallization.

Cohobation

The process of returning a distillate to its residue and then re-distilling, often many hundred times, especially in a pelican or double-headed still.

The English alchemist Thomas Charnock carried out this process nearly 500 times, obsessively, as if this would make his substance, his Stone, more potent; similar to potentizing in homeopathy.

Colchis

Golden Fleece country, at the East End of the Euxine or Black Sea, bounded on the north by the Caucasus. Famed as the destination of the Argonauts, who sailed thither to retrieve the Golden Fleece, Colchis was also the home of the enchantress Medea, who used alchemical spells and poisons. For centuries, Zoroastrian magic was preserved there, as the place of initiation.

Collyrium

The metal ore from which lead and antimony

were extracted in Mesopotamia for Operations at Haran and Edessa. The Syriac influence on Arabic words is apparent in the word for lead, 'abaru', which is very common in Arabic treatises on alchemy and which is the same in Syriac.

Colonna, Francesco

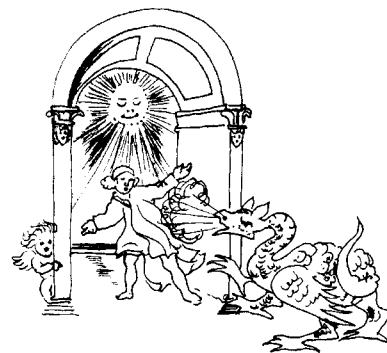
A fifteenth-century Dominican monk, alchemist and the presumed author of the allegory *The Dream of Polyphilus*, which appeared anonymously in 1499, beautifully printed by Aldus Manutius, founder of the Aldine Press in Venice. In itself this book is a work of alchemy: a threefold fusion of writer, printer and punch-cutter.

The allegory takes Polyphilus (the Lover) on an alchemical journey to the divine 'conjunctio' or marriage with his Polia (the Beloved). The journey is a wonderland punctuated by



Illustrations for Colonna's *Hypnerotomachia* (The Dream of Polyphilus).

architectural buildings resembling the sacred solids of Pythagoras: a square pyramid, an obelisk, a queen's courtyard laid out as a giant chessboard, three gates, a round temple, a seven-sided fountain, a maze, mountains, rivers, tunnels, a graveyard, a circular mystic island and a sacred rose-garden.



Colonna, Francesco





Colours

The characters that Polyphilus encounters are culled from all kinds of faerie: dragons and nymphs, revellers, the Queen Eleuterillida, the four elements, Venus, Pluto, Cupid, Queen Psyche, quite *Midsummer Night's Dream*-like. Yet the story is not just Shakespeare's *Dream*. It has echoes of the medieval *Roman de la Rose*, Dante's *Inferno*, and Lewis Carroll's *Through the Looking-Glass* with its queens and giant chessboard and Jabberwock dragon. And from Colonna's *Dream*, the Rosicrucian, Andreae, took his ideas for *The Chymical Wedding of Christian Rosencreutz*.

Colours

These are vital in assessing each stage of the Great Work. The fourth-century Zosimos writes of the black of prime matter through the 'white, yellow and violet stages in the successive operations of the stone'. Each stage was dependent on the level of heat, and each level of heat had its own colour.

These Four Degrees of heat were standard through the ages. There is a delightful illustration of them in Stolcius' *Viridarium Chemicum* of 1624.

As it has a much higher vibration than sound, colour has a much stronger impact on the body, human or otherwise. So even finer chemical changes are brought about by colour than by sound. In terms of healing we mostly know only of ultra-violet lamps, or black-out curtains to heal migraine, or colour filters for scotopic vision among certain dyslexic people. However, to work with the correspondences between body-area and colour is one of the most logical ways of healing. From Paracelsus onwards through Hahnemann and Goethe, with their laws of sympathies and antipathies, homeopaths and alchemists have been practising colour therapy until the present day. See also Indigo.

Compostela

Santiago de Compostela is the alchemists'

Mecca. It is the site of the Gothic Cathedral of St James of Compostela in northwest Spain, the chief place of pilgrimage throughout the Middle Ages. To arrive there, Jew, Christian and Muslim would travel on foot for many years from all over the alchemical world: Alexandria, Prague, Sicily, Baghdad and Constantinople. Hermetic and alchemical manuscripts would be exchanged and interpreted, and initiations would take place under the sacred ogives (vaulted arches). The art of 'envoûtement' worked on the pilgrims who stood beneath them. Spiritual transformations happened there. As Walter Lang says, 'God is an alchemist'.



St James (Santiago) with scallop shell. After a carving on the Romanesque church at Zamora, Spain.



The telluric currents under the site of St James were supposedly similar to those under Chartres and other great Gothic cathedrals. They drew pilgrims westwards to these spots of earth-energy. These cathedrals, sanctuaries of the sciences, the arts, the Tradition, were giant alchemical vessels, whose contents or congregations underwent transformation, refinement and final union with God.

This tremendous cathedral, dedicated to the Knightly Order of Santiago (St James) on the North Atlantic coast of Galicia, known as Compostela, was founded by Sanchez the Great in celebration of the retreat of the Moors. It is said that he enlisted the help of the cathedral masons at Cluny, one of the three brotherhoods of master-builders known as the Children of Master Jacques (i.e. James). The cult of St James was no doubt influenced by James the Companion of the Lord, leading the faithful to victory on his white horse, a sort of counterpart to the Islamic Jihad, which was still so recently felt in Spain from where the Moors had been expected in 1492.

The special pilgrimage or periplus of the year was the thousand-mile round trip from Cluny to Compostela, with the adept or 'compos' being guided by the 'stella', like the magi over the desert sands with their shell of protection.

The proverbial Spanish name for the Milky Way is 'El Camino de Santiago' (the Santiago Road), while the cabalistic meaning of Compostela is 'compos', the one master/possessor; and 'stella' (ablative) or 'stellae' (genitive), of the star – i.e. of gold, the alchemical Stone.

The shell of Compostela is also a symbol for mercury and placed at the entrance of shrines and certain freemasons' buildings. The greatest legendary alchemical pilgrim along the 'path of the star' or 'campus stellae' was Nicholas Flamel. He undertook the alchemist's long journey, first by land, then by water. In his *Figures Hiéroglyphiques* he asked 'Monsieur Jacques de Galice' for help, light, and protection.

Conflagration

Meaning 'going up in fire', this is an appropriate word in alchemy! Chartres Cathedral suffered thirteen conflagrations in three hundred and fifty years since its founding in the year 1000.

Many deliberate conflagrations targeted people and places with alchemical knowledge: libraries, especially those of Alexandria, Byzantium and Toledo; observatories, especially Tycho Brahe's at Prague in the Thirty Years' War; cathedrals, especially Chartres and Cluny; and people, especially Bruno at the stake in 1600.

Congelatio

For some, not all, the second stage of the Great Work (the first being Calcination, and the third being Fixation). Congelation is associated with Taurus the Bull. The word was often used synonymously with Coagulation, but Congelation usually implied the opposite of 'fusion'.

Conjunctio

An alchemical marriage; a joining, or conjunction or fusion on different levels:

- 1 physico-chemical, as in laboratory experiments with the fusion of metals;
- 2 emotional, as in Christian Rosy Cross when he is joined with his beloved (see Andreae);
- 3 spiritual, as when Boehme or other spiritual alchemists are in union with God;
- 4 astrological, as Sun and Moon conjunction;
- 5 allegorical, as the Hermaphrodite, the Androgyne.

See also Andreae; Androgyne; Boehme.

Constantia, Leona

The Abbess of Clermont, who was received into the Rosicrucian Order as a fully practising member and honorary Master in the year 1736.



Constantine the African

It so happened that the only known existing Rosicrucian Order of 1736 came under the control of the freemasons and was on the point of ceasing to recruit women. But by 1794 the Order was, in the words of A.E. Waite, 'just emerging from the alembics of the French Revolution and it broke free from the restrictions imposed on it by masonry.'

Constantine the African

(b. 1020; d. 1087, Monte Cassino)

The most barbarous of the Barbaro-Latin translators of Arabian medical science, alchemy and mathematics.

An eleventh-century Tunisian, he roved around the Mediterranean before becoming a monk at the famed monastery of Monte Cassino in Campania, seat of the Benedictines. He set about transcribing as many ancient Greek and Arabian texts into Latin as he could, between his arrival c. 1070 and his death in 1087. His Latin shows he has sometimes wildly misunderstood the original Arabic and equally wildly misconstrued his Latin grammar. But at least he made a start on the revival of Greek scientific learning in medieval Europe where Islamic medicine and science had all but perished into any old abracadabra.

Constantine translated into Latin the *Aphorisms* of Hippocrates from the Arabic version of Hunayn, the *Prognostica* of Hippocrates, and works by Galen and Isaac.

Abracadabra. A Kabbalistic charm, apparently constructed from the initials of the Hebrew words AB (father), BEN (son), and RUACH ACADASCH (Holy Spirit). Considered to be an antidote for ailments, the word was originally written on parchment and suspended from the neck by a linen thread in the triangular format.

ABRACADABRA
ABRACADABR
ABRACADAB
ABRACADA
ABRACAD
ABRACA
ABRAC
ABRA
ABR
AB
A

His major translation direct into Latin from the original Arabic was Rhazes' alchemical *Liber Experimentorum*.

Constantine was not a respecter of other people's copyright or authorship, and took the kudos for many of the works that Hunayn had either translated from the Greek or written himself, such as his *Ten Treatises on the Eye*. This turned up as Constantine's *De Oculis*, with no acknowledgments.

Copperas

Ferrous sulphate or green vitriol; a pale green crystalline soluble salt used in dyeing, tanning and ink-making.

Copts

A group of Phoenician peoples settled in north Egypt, whose language is related to Pharaonic Egyptian. The word 'copt' either derives from Coptetus (< al-kibt < al-kubt [Copt]); or Copts (< gyptios < aiguptios [Egyptian]).

The Copts were early transmitters of alchemy, chrysopoeia and metallurgy. They believed in exorcisms, healing and visions of saints, including St Anthony, one of the early Coptic Desert Fathers. They were famous for praxis, manual labour and contemplation rather than intellectual study. But to the Copts is owed the preservation of the Hermetic papyri. As intermediaries between the Pharaonic Egyptians and the Alexandrian Greeks and Jews, the Coptic scholars could decipher the ancient hieroglyphs and translate them into Greek. According to Coptic tradition, the Great Pyramid was built before the Flood. It was King Surid who had it built and who ordered his priests to write down their amassed wisdom on scrolls and conceal them under the Pyramid.

In the seventeenth century the brilliant Jesuit, Athanasius Kircher, worked out that Egypt, not Greece, was the home of original wisdom, and that Coptic was a descendant of Egyptian hieroglyphs.

F

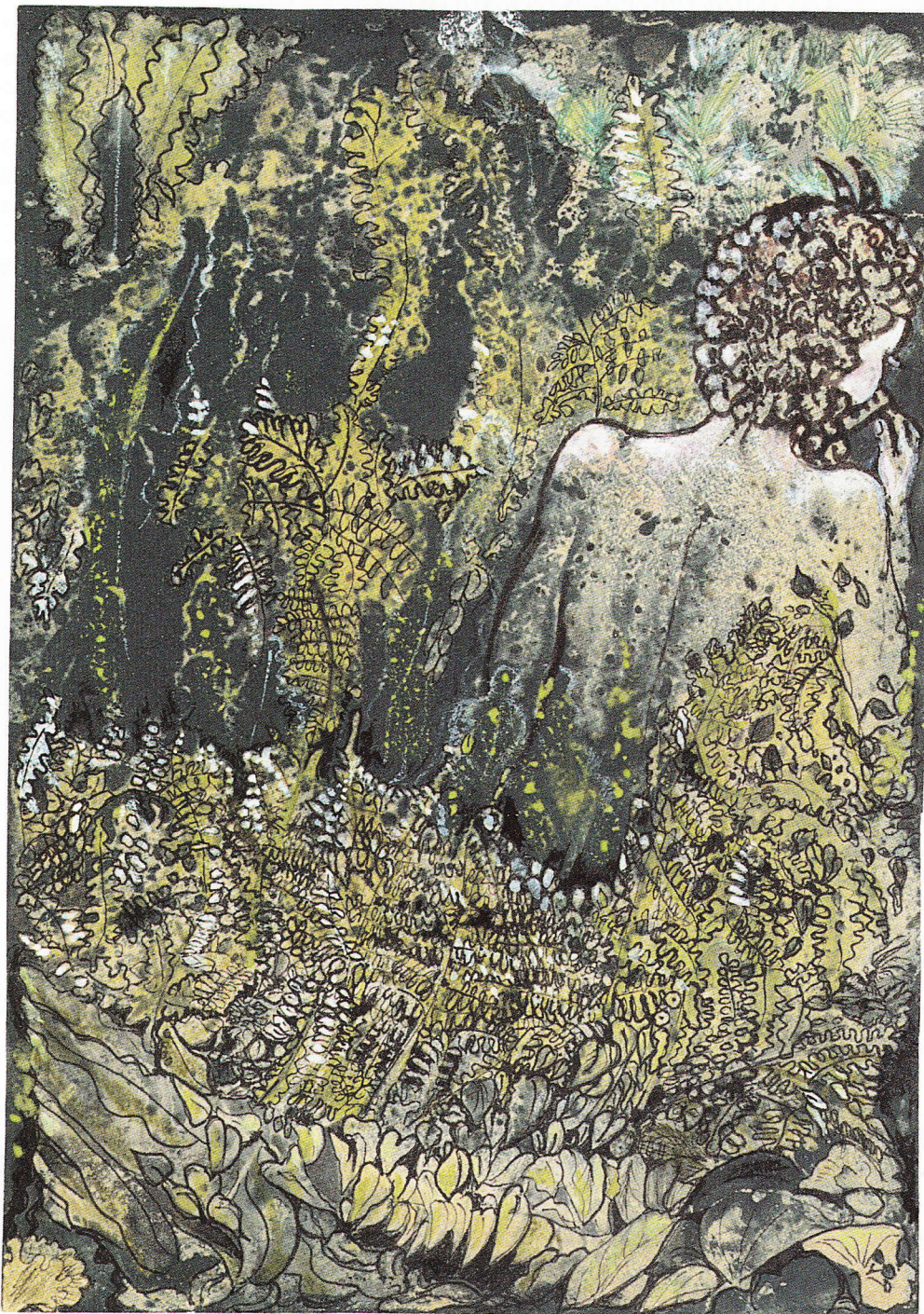
OUR PRINCIPLES OF THE DIVINE IN ALCHEMY,
FROM FOUR DIFFERENT TRADITIONS

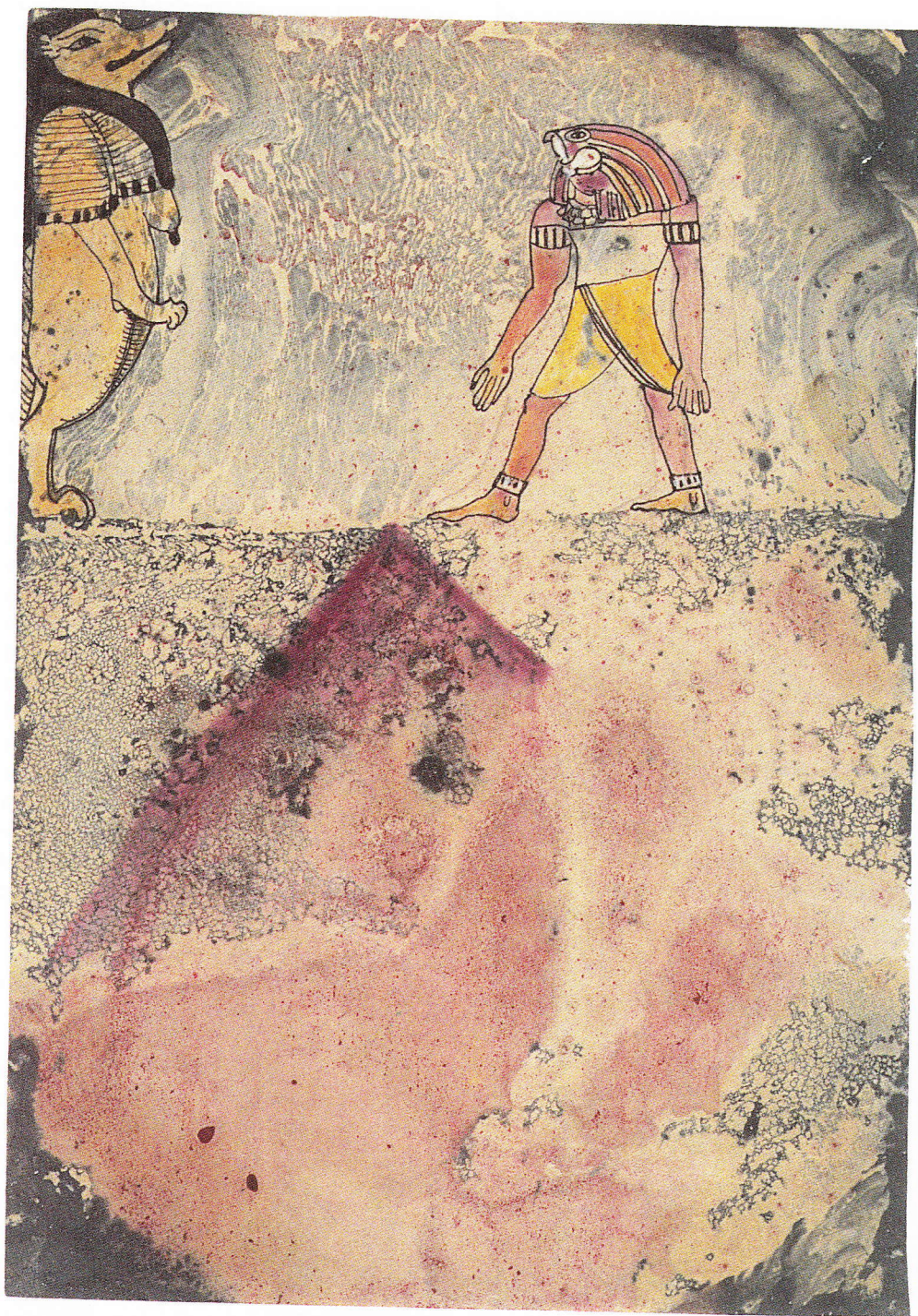
1 GOD, the Creator. In Kabbalistic alchemy Jahveh, the Jewish-Christian God, was the patriarchal creator behind all evolution and transformation. The picture works clockwise from the top right, down to the primitive sea-creatures at God's feet, then round to the left, coming up to the birds and land animals. Artist: *Diana Fernando*



2 PAN, the early Greek goat-god, is the transforming power in nature at its most primitive. His two horns, head and body form the hieroglyph of Mercury ♀, his silhouette the phallic herm.

Artist: Diana Fernando





3 TYPHON AND OSIRIS/SOKARIS. The Egyptian Typhon (madness, chaos) is the hermaphrodite god who destroyed his brother Osiris. Here he (on the left) faces Osiris in the underworld of the Bent Pyramid that keeps its secrets unsolved. Alchemically, Typhon (nigredo, the black shadow-state) has to be sublimated and confronted by what he has destroyed. Osiris, the death-god, in turn rises and is recreated in the light of consciousness as Sokaris the fertility god.
Artist: Diana Fernando

4 KRISHNA AND RADHA. In Rasayana (Indian alchemy, where 'rasa' means mercury) the boyish god Krishna is gold and Radha silver, who join as the hermaphrodite after Krishna, the trickster who can transform himself into anything, has led her a merry dance. *Artist: Diana Fernando*





Cornelius Agrippa, Henry (1486–1535)

Unlike his Master of Masters, Trithemius, Cornelius Agrippa was a 'seeker all his life and attained neither science nor peace', according to Eliphas Lévi, the occult magus. But his devotee, Thomas Vaughan, in his *Anima Magica Abscondita* of 1650, calls him 'the Oracle of Magic', and the 'Master of Wierus' (John Wier, student and Boswell to Cornelius).

In most early biographies Cornelius smacks of black magic. He shares with Faust 'the odium of Satanic intimacy'. There were rumours that Cornelius slept nightly in the moon, that he could 'get' from Fribourg in Switzerland after a lecture to Point-à-Nousson in France within a second. According to some, Cornelius' dogs were construed as diabolical familiars, and one of them haunted the sage's dying bed, ready to spring upon his soul as it quitted the body. The real Cornelius, as far as we can glean from his own words, was far from this Satanic monster. In submitting his manuscript for his masterly *Occulta Philosophia* to his mentor Trithemius, Cornelius wrote that his aim was only to 'vindicate against the ill words of calumniators and restore that ancient Magic, studied by all the wise, purged and freed from the errors of impiety, and adorned with its own reasonable system'.

Trithemius (at that time Abbot of St James's in Wurzburg) wrote him kindly but pertinent advice:

Speak of things public to the public, but of things lofty and secret, only to the loftiest and most private of your friends. Hay to an ox and sugar to a parrot. Rightly interpret this, lest you, as some others have been, be trampled down by oxen.

However Cornelius, ever a Germanic thunderer, couldn't resist placing before the oxen 'a pabulum unfitted' to them. He attracted the scorn and displeasure of the Divine Dignitaries of Dole. But at least he refrained from finding a publisher for the time being.



The legendary Cornelius Agrippa degenerated into the horrid magician of nursery rhymes.

In his *Occulta Philosophia*, Agrippa was in a direct line of thought from the Neoplatonists of Alexandria and Byzantium; he added to this cabala and the Paracelsan doctrine of sympathies, and demonstrated how it all tied in with the nature of the First Cause, that is, God and Creation.

Book I deals with the threefold world: the world of the elements, the world of the heavens and the world of sacred mysteries. Cornelius shows how each of these worlds interconnects with its 'virtues' and 'essences'. The way to all this for Cornelius was by experiment and research.

Book II, the celestial world, is a world of sacred numbers, Pythagorean geometry and Jewish gematria.

Since Book III of the *Occulta Philosophia* is a how-to-do-it manual on the higher stages of theurgy, it seems likely that Cornelius did have instruction direct from Trithemius in cabala and ceremonial magic (which is what Dee later



Cornelius Agrippa, Henry

seized on). Although Cornelius didn't publish all of this officially, his reputation as a sorcerer alarmed the German officials.

The Emperor arranged for him to be shipped off to London, to John Colet, Dean of St Paul's. There is no evidence that Cornelius actually did meet Colet, although he is supposed to have lodged at Colet's house in Stepney where the two men buried their noses in the Epistles of St Paul (in angel-magic, more probably). It was now 1511; Cornelius was only 25 after all this, so the emperor marched him off to fight with the German army against Italy. Agrippa managed to squeeze in a good few lectures on Plato in the universities of the conquered Italian cities before being taken prisoner by the Swiss at the Battle of Pavia. It is said that his magical manuscripts, tucked into hanging pockets under his uniform, were scattered on the field of battle.

He was released and rescued from a really low ebb by the philanthropic Marquis of Montferrat. Back in Pavia, he lectured on the *Pimander* and was dubbed Doctor of Law and of Medicine by the open-mouthed Pavian University Senate.

The militant magus campaigned against religious superstition all over north Italy, his wife trailing along, from town to town. In 1518, aged 32, Agrippa was appointed Advocate and Orator of the free town of Metz. Here he worked as a doctor, healing those smitten with the plague, using alchemical arcana derived from antimony and dioscordium (as Croll did). His acerbic tongue could not be curbed as he railed against his 'brotherkins', the friars at Metz. Bound to leave after this, he returned to Cologne where his wife was plagued literally to death.

His wanderlust took him to Switzerland where he was able to work as a physician and councillor in Fribourg, and settle for another wife called Loyse Tyssie, a girl of 19 from Geneva (by whom he had six children), and for whom he wrote *On the Pre-eminence of Woman, and the Sanctity of Marriage*.

After trying for over two years to get a

salary from the French Court, Cornelius was invited by a friend, Father Aurelius, to settle in Antwerp and practise magic with him and another friend, Augustine Furnario.

He was unpopular at the French Court because he refused to perform cheap magic tricks, and so he upped and went to Antwerp. It was a nightmarish journey with his entourage of nine persons and no money. At last he got a licence to print his works. John Wier, who was to include Agrippa's biography in his *De Praestigiis Daemonum Incantationibus* (1563), lived in his house and upheld Agrippa's reputation to the end. Wier said that the *Arbatel*, Book IV of the *Occulta Philosophia*, was not by Cornelius, even though King James I was later to maintain, in his *Daemonologie*, that it was.

But people in his household were dropping with the plague like nine-pins (in fact, all nine pins), including his little wife whom he just managed to catch in his arms when he rushed home before she died.

Just as all this was happening Henry VIII invited him to London, and other (im)famous influential and powerful people invited him into their service. But Cornelius now wanted to put the well-being of his children first, so he remained in Antwerp.

In 1530 Cornelius, aged 44, wrote his *On the Vanity of Arts and Sciences*, a tongue-in-cheek attack on Court and Ecclesiasts. It contained enough evidence for courtiers and prelates to traduce him as a magician. His plan to write his defence of Queen Catherine of England whom Henry VIII wanted to divorce was thwarted because of creditors and comen. Instead of the walls of Hampton Court around him, Cornelius faced the walls of Brussels prison. Thanks to his friends, though, he got a speedy court hearing, where he called for justice not mercy. His speech was vitriolic in its attack on a system of justice that had done nothing for its citizens. With panache unparalleled (and without the gentleman in question's permission) he proclaimed, 'Accept the Emperor as my bail!' This would have



caused a rumpus had it not been for the hasty intercession of the Bishop of Liège and Cardinal Campeggio.

The publication of one volume of his *Occult Philosophy* in 1531 and the publication of his *Vanitas* in 1532 did not help his cause against jealous clergy. Cornelius admitted in the Dedication the cynical spirit of the book: 'I write this because I see men puffed up with human knowledge. True happiness consists not in understanding but in living understandingly ...'

In the text of the *Vanity*, Cornelius reviews the ancient history of magic. 'Magicians,' he says, 'are the most accurate inquirers into nature, and frequently produce effects before the time ordained by nature.' There is really nothing miraculous in producing roses and ripe figs in March or in causing thunder or rain, transmutations or transfigurations. He goes on to discuss Natural Magic, Ceremonial Magic and Mathematical Magic, explaining that Theurgy or Divine Magic is the search for communion with the good angels by purification of the soul. As to cabala, Agrippa is in favour of Christian cabala. He says the Jews are no good at that; they are only good at the old Jewish Kabbalah.

Then Cornelius regrets his early wasted time and energy in writing his *Occulta Philosophia*. The emperor demanded that Cornelius publicly recant his present opinions. Cornelius published an apology for his work, denying he had said anything that didn't conform with the Catholic Church. The monks objected, but Cornelius stated that authority came from God alone; he cited Luther as both heretic, and unconquered in argument!

On alchemy, Cornelius is deliberately woolly and contradictory. The blessed subject of the most holy Philosopher's Stone is not to be spoken of without perjury. But Cornelius does say something of it in riddles. It is not too fiery, nor altogether earthy. He concludes with a diatribe against all alchemists who do not practise the spiritual Art.

Cornelius' last years were poverty stricken

and obscured by an unfortunate third marriage, and another bout in prison. The loyal Wier gives his death as 1535 in Grenoble, at peace with the Catholic Church and with the Preaching Friars, in whose churchyard he was buried. But even this is not certain.

Cosmetics

Eye make-up, lipsticks and perfumes were alchemically prepared in ancient Egypt and Mesopotamia. In Egypt the cosmetics industry thrived. Eye make-up was either black (kohl, soot, burnt almond shells, sibnite or galena) or green, from malachite or conifer resin. Lipsticks were made from animal fats, a similar process to candle making.

Perfumes were extracted from flowers and aromatic resins. The method of extracting perfume for scents and pomades is ancient indeed. Distilling apparatus dating back to 3500BC have been dug up in Mesopotamia. See also Pelican; Soxlet Extractor.

Croll, Oswald (1563?-1608/9)

One of the few alchemists who was *not* welcomed by Rudolph II of Bohemia.

Croll was reputed to be a follower of Paracelsus, both in godliness and medical miraculousness. Like Paracelsus, he believed in the sidereal body of man: the star body, which corresponded to the constellations of the zodiac.

It was the Fall that brought disease into the world, but man's inner nature is godly and can influence his outer nature and effect cures alchemically.

Croll's wanderings around the universities of Germany and the Palatinate are a subdued repeat of Paracelsus: defiant stridings against the science of Aristotle and Galen. He joined Marburg University in 1576, graduating with a Doctorate in Medicine in 1582. He then moved round Heidelberg, Strasburg and Geneva Universities, coming to a temporary rest in Lyon with the d'Esnes family, where he was tutor from 1583 to 1590.



Croll, Oswald

Thereafter, he tutored the household of Count Maximilian of Pappenheim in Tübingen, before turning up in Prague in 1597, where he practised medicine, but not chez Rudolph. He worked on his *magnum opus*, his *Basilica Chymica*, from 1598 and dedicated it to his patron, Prince Christian I of Anhalt, Bernburg, Upper Palatine, whose physician he became.

There is some mystery as to what happened next. Croll obviously moved around Bohemia as agent for Anhalt, among the rich and recondite. The alchemist Peter Vok von Rozmberk was in close contact with him. Vok had a huge library at Trebon full of Paracelsan manuscripts, which Croll is known to have visited in 1607. The *Basilica* was finished in 1608 and included a letter to Croll from Vok (the letter is dated Trebon, 31 August 1608), as well as the *Treatise on Signatures* dedicated to Vok (the dedication is dated 10 September 1608).

Croll had acquaintances among the most sought-after alchemists of Bohemia, Moravia and the Palatinate: Bulderus, Court Physician at Trebon, Michael Maier, Zerotin, Khunrath, Thurneysser. He had access to the best libraries of Paracelsan collections, notably those of Pontanus and Lobkovic. He came to know poets (even including in his *Basilica* some verses of the sensational Englishwoman 'Westonia') and publishers such as the De Bry and the Wechel dynasties.

Somehow he displeased Rudolph. He went to visit the earless Edward Kelley at the castle at Most, where Rudolph had imprisoned him in order, perhaps, to elicit from him the secrets of the elixir.

Whether Croll died before the end of 1608 or in 1609 is not clear, but it was in Prague, and his precious manuscripts 'secret matters' got into the hands of Rudolph. People talked of a chest of strange and wondrous writings, which presumably Rudolph was itching to acquire. It could have been that Rudolph was not too happy about the dedication of the *Basilica* to his rival Anhalt, and the dedication of the *Signatures* to a pretender like Vok. It could

have been that Croll mentions some herbs that came from Rudolph's estate in Brandeis and the envious Emperor felt left out. So Croll was got rid of.

His *Basilica* was kept in several editions at the Lobkovic and other libraries famed throughout Bohemia.

After his death Croll was referred to as something of an authority. Robert Burton thinks highly of 'Oswaldus Crollius, phys & alchemist, ... auth. *Basilica Chymica*, a Tract on Signatures, or the alchemic sympathies of certain drugs & plants for certain diseases, & co'. The *Anatomy of Melancholy* is interspersed with approving comments on Croll's understanding of the 'magnetically cured' weapon salve and the powers of precious stones, especially salt of Corals ('to purify the blood for all melancholy affections'), and gold, whether potable or 'fulminating', which 'shall imitate thunder and lightning, and crack louder than any gunpowder'.

The occult magician Elephas Lévi refers to Croll as an initiated doctor contemporary with Khunrath, author of the *Book of Signatures, or True and Vital Anatomy of the Greater and Lesser World*. This work, his *Basilica*, develops exponentially the *Tablet of Hermes*, 'as above, so below', meaning everything in the macrocosm has its correspondence in the microcosm.

God and nature have put their signatures on all their works, so that those with occult training will be able to read this divine book of signatures, of sympathies, of antipathies, of all things in creation, from the highest stars down to minerals, crystals, flowers and smallest pebbles.

We lack the grammar, said Croll, to read the mysterious language of these worlds. It is enfolded in the ancient Hermetic hieroglyphs, which corresponded to the laws of geometry, form, movement, equilibrium. How to rediscover this lost universal language of the sacred letters of Thoth, the language of the creative Word, the Logos: this is what Croll tries to do.



Cryptic figures

Նշր ճշգրտագործ
 ծր նհօ՞ց ԳՏԻՎՆՅՆՍ
 Խօ՞ք յօ՞հրօ
 Մօ՞ղջն Էրե՞ն Գրքօ՞ն Լօ՞ճ Խճ
 Գրքօ՞հ Երգգ

Լա՞ծ Ժրք՞ն Մահ օրջօրն
 Ժա՞ծօ՞ն Լա՞ճ Մօ՞ճ Բօ՞ն
 Մր՞ն հօրք՞ն Բօ՞ն Բօ՞ն
 ԽՍԴ՞ն հօրք՞ն Ե՞ն Բօ՞ն
 Ե՞ն Բօ՞ն Բօ՞ն Բօ՞ն
 Բօ՞ն Բօ՞ն

Cryptic figures. In Andreae's *Chymical Wedding* the first set of cryptic figures shown here was inscribed on the iron door of a sepulchre that Christian Rosencreutz discovered on the fifth day of the narrative. The meaning is: 'Here lies buried Venus the fair woman who has undone many a great man, both in fortune, honour, blessing and prosperity.' The second series of cryptic figures reads: 'When the fruit of my tree shall be completely melted, I shall wake and be mother of a king.' This text was said to be inscribed on a tablet behind the couch of Venus.

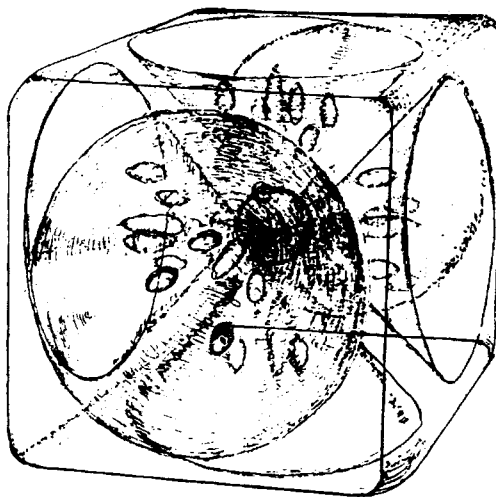
Such figures include anything to veil arcana from the profane! Alchemy is riddled with secret languages, acrostics and rabbinical anagrams, so abstruse as to be nightmarish. The German adept Michael Maier explains the Rosicrucian letters R.⬤. C.⬤. thus: D.wmme.zii,w.skgqq hka.x. Presumably Maier had the key to this, but it was buried with him in 1622.

Crystallization

Coagulation or congelation. See also Congelatio.

Cube

The cube represented the earth in Pythagorean, Platonic, and Indian traditions. In Egypt the Pharaoh is often depicted sitting on a cubic throne. Cube statues were especially prevalent in the Middle Kingdom (2040–1783BC), and cube thrones were carved on tomb walls and temples. The cube represented 'kemi', 'al-kemi', the black earth from which the spiritual 'King' arose.



The atomic make-up of a cube of boron seen in a trance state by the theosophist Annie Besant.

Cucourbit

A gourd, or lower part of a still, used in the alchemical Operation of distillation.

Cupellation

The method of blasting out refined gold from impure metals in a porous crucible or 'cupel'. Amongst alchemists in the pre-Christian era, it was a method known to the Mediterraneans of extracting precious metals from their ores by fusing with lead and blasting off the base metal oxides. Silver could be separated from gold by the ingenious addition of salt and barley to the lead and other metals.



Daemonologie

A book on Witchcraft, published in Edinburgh (1597) and twice in London (1603). See also James VI and I.

Damascening

The process of inlaying ornaments with gold or silver. Originating with the metallurgists and alchemical gold workers in Byzantium and later in Damascus during the early Christian era, damascening was also associated in the crusades with the engraving of magical glyphs in the swords of the Knights Templar.

Damascus

The city of a thousand years before Abraham, which suffered all manner of muddle from the Romans, Persians, Umayyads, Abbasids and Fatimids, Zangids, Christians and Mamluks.

As the centre of the Umayyad Court (661–749), Damascus was the birthplace, in 660, of the first Muslim alchemist, Prince Khalid. It was to this Court that the Persian Jew, Masarjawaih, brought his new Arabic

version of Ahron's *Pandects* from the Jundeshapur Academy; and it was here in 730 that the magus Abdul Alhazred reputedly composed his grimoire, known as the *Necronomicon*.

Damascus harbours the tomb of the greatest Kurd in history, Saladdin, under a simple white dome. It also guards the graves of two brilliant if little known alchemists: Ibn Arabi (d. 1240) and Ibn Al-Qifti (d. 1248). See also Caliph; Ibn Arabi; Khalid; Necronomicon; Pandects.

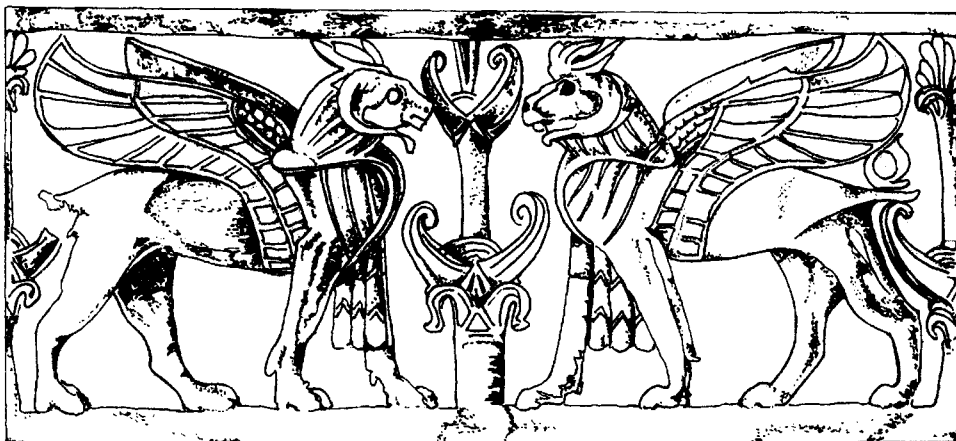
Dead carcass

A metaphor for 'anatomy', used by Paracelsus to explain how old doctors, in trying to heal people, clung to anatomy without trying the transmutational medium of alchemy (mercury and so on).

De Alchimia, De Animalibus, De Vegetabilibus

The three main alchemical treatises of Albertus Magnus of Ratisbon and Cologne (c. 1193–1280), a scholastic doctor, mildly interested in alchemy – if by default or panic. A Dominican, his learned works include commentaries on Pliny and Aristotle, and studies on the seams of metallic ore. His claim to fame is as the greatest thirteenth-century mind and the teacher of St Thomas Aquinas.

Winged lion carvings in the walls of Damascus going back to Old Testament times.



De Bry

A family of brilliant engravers and printers who moved between the Netherlands, Germany and Bohemia in the sixteenth and seventeenth centuries. Through extraordinary interconnections and marriages, they mixed with whoever was important in the occult world. They engraved and printed a great many emblematic alchemical books, while in Protestant England there was an uneasy suspicion of such publishers. The De Brys may well have been Rosicrucians. Theodor the Elder, at least, belonged to a secret society called the Family of Love.

In the 1590s, he had emigrated for religious reasons from Liège to Frankfurt where he set up his printing and engraving business with his two sons, Johann Israel and Johann Theodor. It was Theo the Elder who published the marvellous voyages of discoveries to the New World, including John White's *Voyages to Virginia*, Hakluyt's *Voyages* and the *Peregrinationum in Indiam Orientalem et Occidentalem* which his son's son-in-law, Matthew Merian the Elder, finished engraving in 1634. Lucas Jennis published Maier's *Symbola Aureae* with copper plates by Rudolph de Bry (1617), and Theodor the Younger published Maier's *Atalanta Fugiens* with engravings by Matthew Merian (1618). This ceaseless pair also published Robert Fludd's massive *Utriusque* (1617, 1618 and 1619). The family linked with other publishers: Lucas Jennis, the Wechels (who published Dee and Bruno) and the Plantins, publishers of the alchemist Nicolas Barnaud – all of them involved in secret brotherhoods of some sort or another.

The De Bry clan continued publishing daring and alchemical medical works well into the seventeenth century, including the *De Motu* of the English court physician William Harvey (1628). Harvey had been lecturing on the movement of the blood since 1616 but hadn't dared publish anything until another De Bry son-in-law, William Fitzner, took up his cause in

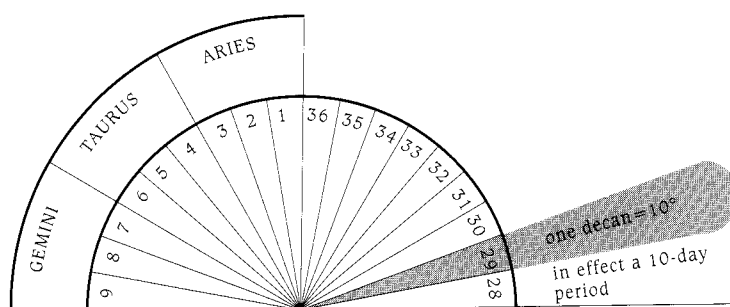
1628. *On the Motions of the Heart and Blood* was published by Fitzner in Holland albeit in a small book of only 72 pages, printed on thin, cheap paper and full of typographical errors, which would have made the grand old Master, Theodor the Elder, turn in his grave. See also Family of Love; Fludd; Jennis; Maier.

Decade

A span of ten, a series of ten; found especially in recipes among the Byzantine alchemical texts for combining metals in different degrees – i.e. a decade of iron, a decade of gold, which has ten orders or degrees in it.

Decan

A segment of ten degrees in a circle divided into 36 segments, according to the cosmic system of the Babylonians (circulated in Ibn Wahshiyya's work and in the *Picatrix*) and the cosmology of Hermes Trismegistus:



As Hermes explains to his pupil Tat (in the text of the *Corpus Hermeticum*):

I have already hinted, my child, that there is a body that envelops the entire world: represent this body to yourself as a circular figure, for it is the form of the All ... Picture now that, under the circle of this body, have been placed the 36 decans, in the middle between the universal circle and the circle of the zodiac ... moving along the zodiac with the planets, and then, being at the heart of

Decan





De Causis

the revolution of the All, they have, alternatively, the same power as the seven (governors).

The 36 decans were originally Egyptian sidereal gods, whose names were preserved in the Egyptian temple archives. They ruled over the sections of the zodiac according to ten degree divisions. So there were three decans per star-sign: three for Aries, three for Taurus, three for Gemini and so on.

Bruno's diagrams of his decans for internalizing his magic memory system are particularly quaint. They were probably inspired by the *Picatrix* and the decans painted on the fresco in the Palazzo Schifanoia at Ferrara.

De Causis

The *Book of Causes* or the *Secret of Creation* belonging to the pile of unauthorized works in alchemy assigned to Apollonius of Tyana. It was not until Silvestre de Sacy in 1799 drew attention to it that anyone thought to question its origins; and it wasn't until the twentieth century that J. Ruska established that the famed *Emerald Tablet* actually comes from the *Book of Causes* and not from the hands of Hermes Trismegistus.

The whole *De Causis* is a Neoplatonic cosmology, explaining in 'as above, so below' detail the aphorisms of the *Emerald Tablet*. It dates from the time of the Caliph Al Ma'amun of Baghdad (813–833), and was translated for the West into Latin by Hugh of Santalla in the 1100s. Taken out of context, it was frequently quoted in medieval commentaries such as the *Secretum Secretorum*, which was for many centuries assumed to be Aristotle's.

Dee, John (1527–1608)

A brilliant scholar, mathematician, diplomat, courtier, traveller, magician and tramp.

More trivia has been written about 'Doctor' John Dee than about any other English magus.

He was not so much interested in alchemy as in the visions of his showstone or crystal ball (which can still be seen in the British Museum, London).

Like a meteor scattering sparks, Dee zoomed through the galaxy of European glitterati, then tailed off into the darkness. He started off life in the swing of Henry VIII's court, the son of a court official. He became tutor to Robert Dudley, Edward Dyer and Sir Philip Sidney, and was hugely influential as Queen Elizabeth's astrologer and '007' secret agent.

He was drawn to philosophy of the sort that the English university system did not allow for: Neoplatonism, and the exciting new alchemical Hermeticism of Pico and Reuchlin, about which orthodox Christianity was uneasy. These subjects were, however, taught at universities abroad: Paris, Padua and Krakow. Dee was, therefore, easily persuaded to go to Poland by Prince Laski (1536–1605), whose visit to England in 1583 included that extraordinary conference in Oxford at which Bruno put down the pundits of scholasticism.

Dee had already lectured extensively in Europe to stunned audiences on magical mathematics, and he had already published his *Monas Hieroglyphica* (1564) and *Preface to Billingsley's Euclide* (1570).

By 1581 he had started his summoning of angels and had just had Edward Kelley land upon him at Mortlake, where people would turn up in droves – including the Queen – on the pretext of a free evening's discussion on politics, philosophy and mathematics, plus the loan of Dee's revolutionary books, and no doubt plenty of food and drink. So when Laski invited Dee to Poland in the autumn of 1583, the party included Dee, Kelley, both their wives and Dee's three children, plus the alchemical paraphernalia about which Dee had consulted the angel Gabriel.

Once in Krakow (March 1584), Dee got two things underway: his sessions with Kelley



Dee's
Monas
symbol



scrying ('surfing the net') for angels, and his introductions round Krakow University's Professors of Alchemy. He had access to the fine library of Hermetic material, including Hannibal Rosselli's voluminous *Pimander Commentaries*, the *Picatrix*, Pico's *Conclusions* and Bruno's *Shadows*.

Laski recommended mingling with Rudolph II's clique. There was Hapsburg money for life if Dee could make alchemical gold for Rudolph's treasury and predict good fortune for this ever-needy Emperor. So Dee and Kelley went to Prague, with various devotees in tow, such as the renegade Catholic Pucci, who saw Dee as a prophet. Dee told Rudolph after seances on 21 and 22 September 1584 that he possessed the secret of the Stone only through the angels (Uriel particularly) not his own knowledge. Now the properties of the red powder that Dee and Kelley had brought with them were weakened with use, and Dee no longer succeeded in projection. He incurred suspicion.

Within a year word spread about the crystal ball, and on 29 May 1586 Dee and company were expelled from Prague by Pope Sixtus V for performing black magic. In addition, Madimi, one of the young female spirit guides had gone too far in her naked attempt in urging Dee and Kelley to wife-swap. They sheltered at Count Rozmberk's castle at Trebon for a while, and at last Dee on 19 December 1586 notes in his *Diary*:

E.K. made projection with his powder in the proportion of one minim (upon an ounce and a quarter of mercury) and produced nearly an ounce of best gold; which gold we afterwards distributed from the crucible.

Dee lived at Rozmberk's expense and on money scrounged from Count Laski in Poland until, on 10 May 1587, he notes in his *Diary*: 'E.K. did open the Great Secret to me, God be Thanked', and on 24 August: 'Vidi aquam divinam demonstratione magnifici domini et amici mei incomparabilis D Ed Kellei ante meridiem tertia hora.' (I saw in a demonstration by the magnif-

icent Lord and by my incomparable friend Edward Kelley divine water at the third hour before noon). And finally on 14 December: 'Mr Edward Kelley gave me the water, earth and all.'

It seems more likely than not that Edward Kelley was hoodwinking Dee, for on 4 February 1588 Dee transferred to Kelley his books and 'the powder' and discharged his obligations in writing. On 16 February 1588, Kelley left Trebon for Prague, and the following month Dee and family departed for England and their ransacked home in Mortlake and never saw Kelley again.

Never again did Dee bask in the confidence of Queen Elizabeth nor of James. After years of waiting he was granted the Wardenship of Christ's College, Manchester. Nothing concerning his alchemical experiments was heard until 1607 when Dee, 'on the brink of the grave' and back in Mortlake, was visited by the Archangel Raphael and promised bodily health and the Philosopher's Stone at last. But Dee died in the faith of his angels in 1608, without the Stone, and in penury, having been reduced to selling many of his precious books to buy food. His life reads like the rise and fall of a Greek hero, whose 'most small fault' was his own gullibility.

De Heptarchia Mystica

De Heptarchia Mystica (On the Mystical Rule of the Seven Planets) is one of John Dee's manuscripts, written during 1582-3, for summoning angels who guard the planets: a how-to-do-it notebook with formulae and magic letter squares, ritual postures and supplications. Dee's tutelary angel is Uriel through whom the presences are invoked with utmost piety.

The immediate inspiration for Dee's grimoires is Cornelius Agrippa's *Occulta Philosophia*, which stems from the magic-master Trithemius, and the widely studied *Picatrix*, which floated around anonymously in the medieval world.



Dei

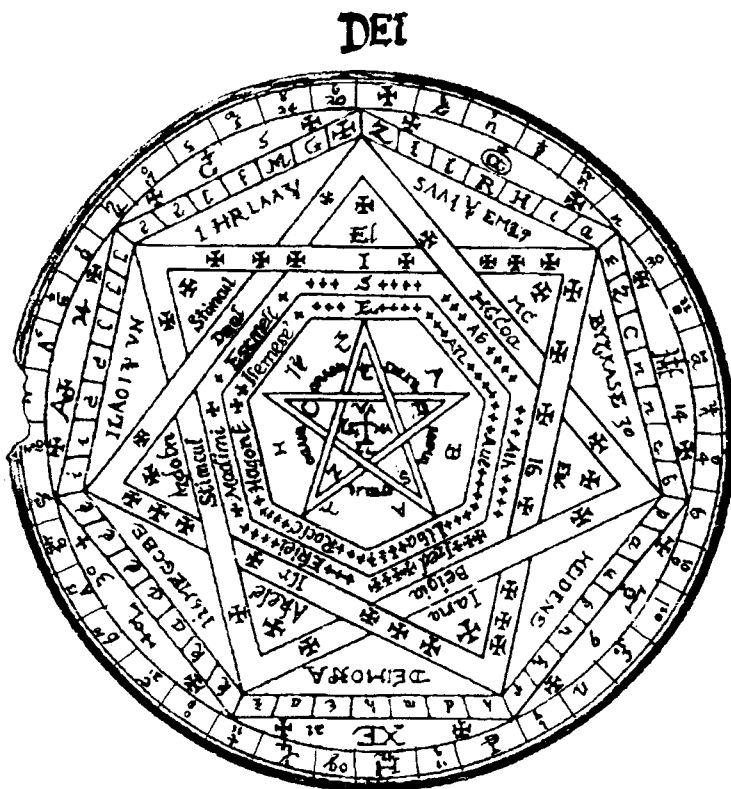
Dei

'Of God' or 'of Dee'! As in 'The Seal of the Truth of God' or 'The Seal of the Truth of Dee', words inscribed in the great seal that was set under the crystal ball used in Dee's magic.

In the design of the Great Seal of John Dee, found in his notebooks, the *Spiritual Diaries*, the word 'Dei' hits the eye first, printed in the middle of the page at the top, then repeated immediately underneath, above the main diagram of the seven-pointed star. The Great Seal was all part of the paraphernalia of Dee's seances. He was, according to his notes, commanded by the Archangel Uriel to prepare very carefully for the sittings at which he and his scribe Kelley would have communications with angels.

The preparations included a special table of many colours, but particularly the primary colours, with magic sigils and letters all over the legs in yellow. The whole table was put on

Dee's design for his Great Seal, showing various names for God and names for angels and spirits, including the temptress Madimi.



wax seals, a fairground trolley with seals for wheels.

The Great Seal, the Sigil of Truth, Emeth, was placed on the tabletop and covered with red silk, on top of which the crystal was set. When the time was ripe and the 'dignification' of Dee and Kelley complete, the sessions of crystal gazing could begin.

Della Porta, Giambattista (1535-1615)

An alchemist, born of noble stock in Naples. In the succession of 'Natural Magic' alchemists such as Cornelius Agrippa and Paracelsus, Della Porta was one of the few peaceful alchemists, able to live in style. He travelled luxuriously, not penuriously, throughout Italy, France and Spain. Sensitive to natural magic (what we might today call unseen forces), he published his first book in 1558 when he was but 13 (if we assume the birthdate his biographer gave is accurate): *Magia Naturalis*, a good book, as juvenilia goes, on psychology and the power of suggestion.

The first edition of this youthful manual was the most widely read and appeared in Latin, French, Italian, German, Dutch and Arabic, while the second edition ran to 20 volumes of which the first section contained an extract of Cornelius Agrippa's *Occult Philosophy*. The rest was a kind of how-to-do-it handbook, with recipes for herbals, perfumes and gunpowder, and a host of observations on the telescope and Paracelsan physiognomics.

One whole section was devoted to alchemy, which Della Porta retrieved from its mystique. He said the thing to do was to be scientific and to learn formulae for melting metals and making medicines for practical healing.

The important departure from the earlier natural magic were his observations on hypnosis. In the Eighth Book of the second edition he described experiments on hypnosis, which later impressed Goethe. Giambattista popularized the natural sciences and cleared away the jungle of jargon surrounding the hitherto 'secret' art of alchemy; he transformed



magic into common sense. While his *Magia Naturalis* remains the best known of his collections, he wrote separate books on Physiognomics, Secret Meanings of the Alphabet, and Distillation. He advocated simple orderly practical experiments; he swept away the shadows (*De Umbris*) of Bruno, eventually scorning glyphs and Egyptian mysteries, even though as a youth he had certainly shared Bruno's interest in them. By 1600 he had attributed it all to a healthy imagination.

Giambattista's books ran to many editions and found their way to the best libraries of Prague and Bohemia and to Dee's library at Mortlake.

Right: Giambattista Della Porta, after a portrait in his *De Distillatione* (Rome, 1608).

Below: Engraving to illustrate analogies between human and lower animal life.



De Re Metallica

A standard work on mining and metallurgy published in Latin (Basel, 1556). Georg Bauer, alias Agricola the author, was a physician for the miners of Joachimstal. The format of the book reflects its contents: the woodcut illustrations neatly emphasize the technical skills of the designers and printers. As well as metallurgy, the book has sections on extracting gold, analysis of metals, of salt and saltpetre and other common materials. It is a practical and clear handbook illustrating laboratory alchemy. See also *Celestial Agriculture*.

Dew

Interpreted on two levels, physical and metaphysical. Physically, dew contains the Salt that acts upon the Sulphur and Mercury of the prime matter. Metaphysically, it is the contents of the divine cup: alchemically the elixir of the Philosopher's Stone.

Dee's title-page for his *Monas Hieroglyphica* has strange alchemical emblems in the pillars

96

DE HVM. PHYSIOGN.



Graciles genæ.

Della Porta: De humana physiognomonia. 1584.



Dibikos

supporting the 'theatre' in which the mercurial hieroglyph is centred. In the left-hand pillar the Sun is weeping dew into a chalice, in the right-hand pillar, the Moon is weeping dew into a chalice, and the motto underneath reads 'De rore caeli et pinguedine terrae det tibi Deus' (May God give you of the dew of heaven and of the fatness of the earth).

Dew is the subject of one of the exquisite

Witches preparing magic beverages



pictures of the *Mutus Liber*: big sheets or tarpaulins are spread out to catch the dew that is raining down from radiant beams on high, while in the foreground a man and a woman are squeezing out one of the sheets to catch this precious substance. There is an interesting corollary: the modern alchemist Armand Barbault was inspired by this 'dew' picture to perform his own Magnum Opus, by collecting dew in sheets (as in the picture) as the distilling agent for his prime matter. His Work, using less than 4 pounds of earth (not even 1800g) took 22 years to mature. When tested in German pharmaceutical laboratories in the 1960s, the elixir obtained defied analysis. It

had taken on a golden hue, and the industrialists at the laboratories talked of a new life-giving substance that they were eager to exploit. Could they take a short cut in labour, time and money? They tried. They were utterly unable to replicate Barbault's elixir; yet he had been totally explicit.

The Latin origin for 'dew', 'ros – roris', has been used with double entendre by Rosicrucians (ros = dew; rosa = rose), while the Germanic origins of 'dew' (deaw < dau < tou < dauwaz) in alchemistic false etymology have been linked with 'devil' (deofol < diubul < tiufal). So 'dew' can be Jahveh/God or its very opposite!

Dibikos

A two-spouted still, just as a three-spouted one was called a 'tribikos'. See also Pelican.

Dignification

The practice of making oneself wholly prepared, as in the angel-conjuration of John Dee, by praying to God and purifying oneself before performing the seance and muttering the mantras. Cornelius Agrippa in his *Occulta Philosophia* points out that the key to performing theurgy is 'the dignifying of men to this so sublime virtue and power'. The main steps in dignification are to give up the appetites of the flesh, to meditate profoundly, and to perform various penances. See also Theurgy.

Diocletian (c. 245–316)

Roman Emperor (reigned 284–305) who abolished alchemy in Egypt in AD292. As Emperor of a teetering tetrarchy surrounded by Goths and Persians, anything that smacked of unorthodoxy terrified Diocletian, who needed anyway to stitch together his 'Roman mantle'. So he persecuted first the Manicheans, then the Christians, then anyone doing what he saw as threatening – alchemists, astrologers, cabalists.



Dionysius the Areopagite (c. 500)

Although shrouded in mystery, he greatly influenced alchemical thought in the Middle Ages. Legend has it that Dionysius was converted by St Paul, and that he travelled from Athens to Paris. There he incurred the wrath of officials and was beheaded, but he picked up his head, washed it and carried it at the level of his heart up to the top of Montmartre, then died!

One of his followers steeped a cloth in his blood, and that cloth became the French flag known as the Oriflamme, the gold flame, the battle flag of Joan of Arc and her armies, whose war-cry was 'Monjoie, Saint Denis!' There legend ends. The Latin 'Dionysius' becomes 'Denis' in French, and the great Gothic Cathedral of St Denis in Paris was the home of Abbot Suger the master-builder, friend of Bernard of Clairvaux. Chartres Cathedral is visual evidence of Dionysius' teachings.

Dioscorides (c. 40 – c. 90)

The greatest pharmacologist among the Hellenic Greeks, and the most popular among Arabian alchemists. He served as a doctor in the Roman army in the reign of Nero (54–68). His *De Materia Medica* was the classic until the nineteenth century. In it are described some 600 plants and their medical properties. It was translated into Arabic by Stephanos, son of Basilios, and was known to Hunayn who corrected it. Many of the Greek names for drugs were transcribed rather than translated.

It was the Emperor Constantine VII who persuaded the Caliph Abd al-Rahman III (reigned 929–961) in Cordova to accept an illustrated Greek codex to facilitate further translations of Greek terms into Arabic.

A number of such manuscripts are still preserved in which Arabic, Latin and Castilian names are entered down the margins of the Greek texts. The last major translator of *De Materia Medica* of the Spanish Renaissance who was interested in iatrochemistry was

Andrés de Laguna (1499–1560). In the sixteenth century Zsambosky of Bohemia prepared an edition for his famous library of medico-alchemical books.

Dodecahedron

In sacred geometry, a 12-sided solid. See Chlorophyll; Rose Windows.

Dolmen

A megalithic altar resting on two or three pillars, originally a vault with special resonating properties, dependent on tension



After the title-page of Dioscorides' *Virtutum Simplicium Medicinarum Liber* (Lyon, 1512).



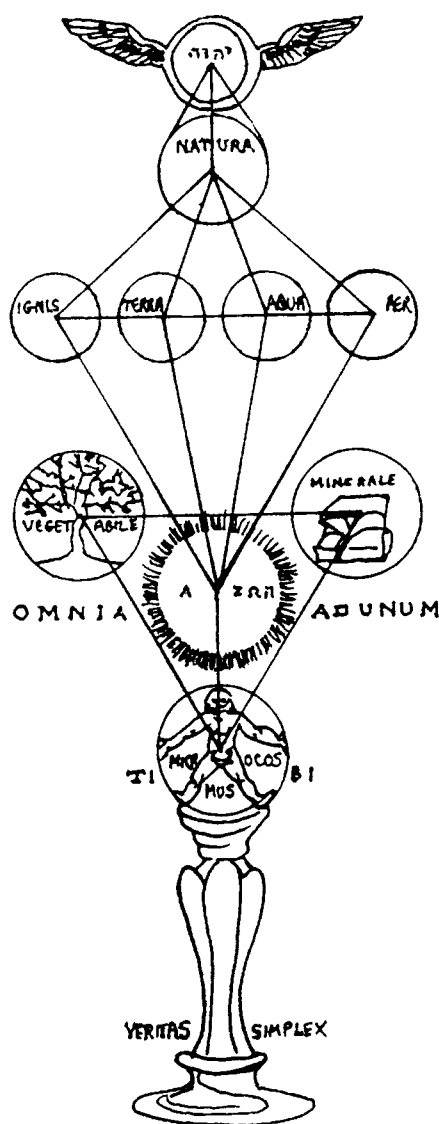
Draught of Wisdom

between weight and thrust. Later developed into Gothic cathedrals. See Goetic; Vault.

Draught of Wisdom

Bottled in its Latin form, 'Poculum Pansophiae', this was said to pass on to the drinker universal understanding of Azoth.

Alchemical diagram from *Geheime Figuren* (Altona, 1785). From the top: the winged Godhead יְהוָה, Jahveh, produces universal nature, from which stem the four elements. Out of these are generated the mineral, vegetable and animal kingdoms, in the centre of which is AZOTH, the universal medicine, Philosophic Mercury. The true Draught of Wisdom is the understanding of the close relationship between all things.



POCULUM PANSOPHIAE

Dung

Often used for the continual slow heat necessary for alchemical, as opposed to chemical, processes. For example, 'Digest in horse dung wine which has been poured in a pelican for two months ... you will see a thin pure substance like a sort of fat which is the spirit of wine spontaneously evolved on the surface ...' (instructions from Paracelsus). That flamboyant eccentric, Thomas Urquhart, refers to it in his *Ekskubalauron*, *The Jewel Hidden in the Dung Hill*, and it was used in compressed simile as a temperature gauge: red-hot > dung-hot > stone-cold.

Dunghill

Defined by Eirenaeus as: 'The place, along with every other place, that the stone is found.'

Duplex

The hermaphrodite, sometimes known as Mercury Duplex, half male, half female. Of the Egyptian deities, Geb and Nut are the duplex who are torn apart – earth from sky, matter from mind; likewise Shu from Tenut – life from order (form).



Eggs

Eggs addle their way through alchemical nests, especially philosophical ones: womb-like incubators or images of the world ('in the egg, therefore, are four things – earth, water, air and fire ...'). Oil of egg will take excess cholesterol out of you, and, since egg also has 'chicken' in it, if you put it on a cut or burn, that cut will grow tissue fast.

The ever-hopeful fifteenth-century peregrinator Bernard of Trevisa is reported to have putrified 2000 eggs in horse dung in his desperate bid for success.

Eirenaeus, Philalethes, the Cosmopolite

'The Peaceable Lover of Truth, the Wanderer of the World.' The most private and poetical of alchemists. This mysterious and nameless seventeenth-century adept known as Eirenaeus wrote his sad and moving testimony to the trials and tribulations of an alchemist in his *Introitus Apertus ad Occlusum Regis Palatium* (The Open Entrance to the Closed Palace of the King). He artlessly described himself as having made the Stone and constantly being able to renew his elixirs.

It appears that he approached the alchemist George Starkey and demonstrated the projection of the powder. Starkey described in very lucid terms this 'artist' and how he made gold. Interestingly, Eirenaeus showed the difficulties of dealing in alchemical gold in countries that each had different gold standards. People were suspicious and would not buy it, nor the elixir of the wise medicinal cures.

Eirenaeus said in his Preface to another of his works, *Ripley Revived*, that he owed his alchemical knowledge firstly to George Ripley,



This Entrance opened into the Hidden Palace of y^e King

SECRETS Reveald:
OR,
An OPEN ENTRANCE
TO THE
Shut-Palace
of the KING:
Containing,
The greatest TREASURE in
CHYMISTRY,
Never yet so plainly Discovered.

Composed
By a most famous ENGLISH-MAN,
Styling himself ANONYMUS,
or EIRENAEUS PHILALETHA
COSMOPOLITA:
Who, by Inspiration and Reading,
attained to the PHILOSOPHERS STONE
at his Age of Twenty three Years,
Anno Domini, 1645.

Published for the Benefit of all English-men,
by W. C. Esq; a true Lover
of Art and Nature.

London, Printed by W. Godbid for William Cooper
in Little St. Bartholomews, near Little-Britain, 1669.

then to Flamel. The Cosmopolite typifies the large majority of alchemists through the ages, 'cosmopolitans' who moved silently from country to country, writing their tracts by hand and disappearing without trace.

William Cooper published in English such works of Eirenaeus that he could find, notably *The Open Entrance* (1669), his *Marrow of Alchemy* and his *Ripley Revived*. Cooper catalogued from hearsay another 13 books that he could not trace.

After the title-page of Newton's copy of Eirenaeus' *Open Entrance* (1669). The figure of Newton lurks behind his own marginal note: 'This Entrance opened into the hidden Palace of ye King.'



Elements

Elements

The belief of the ancients, largely stemming from Anaximander via Aristotle, that all matter was a combination of the four elements (fire and water, opposing air and earth) which in turn formed a basis of all alchemical Operations, was widely held by alchemists of the Middle Ages, until refined by Paracelsus in the fifteenth century.

According to him, water and earth formed the 'elemental body', and fire and air the 'sidereal body'. There are four higher or spiritual elements (the fathers), and four lower or physical (the mothers). Therefore, all beings have four fathers and four mothers. This idea reaches back to the ogdoad, and forward to genetics. See also Ogdoad; Xenophanes.

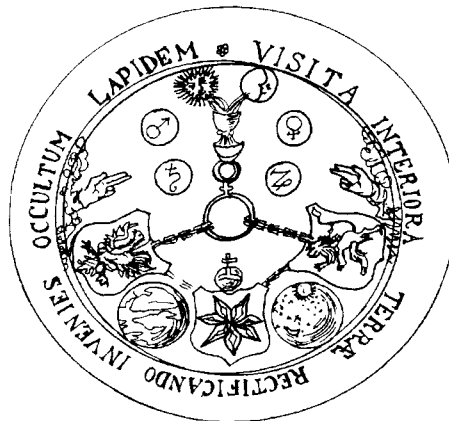
Elixir

One of the nebulous words in alchemy most difficult to pin down. Meanings range from the 'quintessence', the 'animated spirit of a substance', the 'potion for long life' (the Chinese aim in alchemy was firmly this), to the Philosopher's Stone and Mercury. The Chinese used metals and minerals to prepare a Divine Elixir for transformation, but the Arabian Jabir went to town with marrow, blood, bones, lion's urine, onions, peppers and pears! See also Jabir ibn Hayyan; Mercury; Philosopher's Stone; Physika et Mystika; Quadruplex.

Emerald Tablet

One of the oldest of all alchemical texts, ascribed to Hermes or the Egyptian Thoth, showing the principles of universal analogies. The tablet was allegedly found by Alexander the Great in the tomb of Hermes who, with a diamond stylus had engraved on the emerald plate 15 cryptic sentences. 'As above, so below' sums them up. The text was discovered to be the basis of the ninth-century Arabian *Book of Causes*, but it flew off at a tangent since it was so eminently quotable and took on a life of its

own as a tablet. See also De Causis; Physic; Planets; Tattwic Tides.



Symbolic representation of the *Emerald Tablet* as the alchemical Stone.

Enoch

One of the transmitters of the Priestly Art of alchemy. One school of thought in the Middle Ages supposed alchemy to be a gift that was given from God via Razi, the Angel of Mysteries, to Adam, who passed it on to Enoch. In turn, Enoch passed on the gift of alchemy to Abraham, who gave it to Moses; from Moses it was received by Job who apparently septupled his possessions with the help of the Philosopher's Stone.

Enoch was identified with Hermes and the Prophet called Idris in the Koran (buried, according to the tradition of Egyptian Muslims, in a tomb in the Great Pyramid of Cheops).

Hanoth is another variation of Enoch; he who 'walked with God'. The significance of Enoch for alchemists was that he was supposed to possess a complete system of alphabets and sigils, which could be drawn, muttered or mouthed to effect transformations of metals or human beings, of angels or other spirits.

John Dee writes in his *Spiritual Diaries* (Sloane MS 3188, 22 December 1581 to 30 May 1583) how Enochian letters first appeared to him through his scribe Kelley and were



A sample of John Dee's angelic 'calls' including signs and Enochian language that Dee and Kelley received in seances.



Epopts

recorded on 29 March 1582. Over the months, a complete Enochian Dictionary was revealed and Kelley transmitted it as Enochian language. They received another Enochian text between April and August 1585 during their stay in Bohemia (the *Liber Logaeth*, in Sloane 3189).

Years before, on 18 January 1559, Dee had been given a copy of *Voarchadumia* by Joannes Augustinus Pantheus. The book was like many others on cabala except that it showed an alphabet of Enoch. Was this the language of angels that the impressionable Dee memorized and Kelley telepathized 25 years later from Dee's brain? Dee worked inseparably with Kelley and never actually asserted that he saw anything himself. But his personality was so magnetic that susceptible scryers might repeat Dee's ideas as visions. See also Dee; Kelley; Voarchadumia.

Epopts

These pop up from the 'epoptai' of the Eleusinian mysteries: adepts or 'mystes'. Michael Maier uses the word in his *Themis Aurea*.

Ergon

In spiritual alchemy, the 'right eye of the soul, by which it looks to the eternal. The left eye looks towards time and this is the Parergon'.

Erra-Pater

The assumed name of an astrologer and almanac-maker who compiled (c. 1535) an Ephemerides/astrological tables for use in any year. The title-page reads: *The Pronostycacion for ever of Erra-Pater: A Jewe born in Jewery, a Doctour in Astronomie and Physicke ...* See also Decan; Galen; Physic; Zodiac.

Esclepius (Aesculapios or Asclepius)

The son of Apollo and god of medicine, who

came to be worshipped as the god of healing, especially at Epidaurus where there is a circular temple to him patterned with caduceus wands. Cures were allegedly alchemical transformations performed at night and symbolized by Esclepius's caduceus: the snake who sloughs his skin and rejuvenates.

The text known as the *Esclepius*, supposedly written by Hermes Trismegistus, was that part of the *Corpus Hermeticum*, or body of Hermetic Writings, which had remained in circulation up to the Renaissance ever since its translation into Latin in the second century AD. After the fervour of Ficino's revival in 1460, it was edited 40 times between 1471 and 1641, and J. Faber Stapulensis' commentary went through 11 editions.

Alchemists used the *Esclepius* as a spiritual handbook, a guide to creation and man's creative powers. What particularly fired the humanistic imagination is the passage where Hermes speaks to Esclepius: 'And so, Esclepius, a great miracle is man, a being worthy of reverence and honour because he enters into the nature of a god as if he himself were a god.'

This inspired not only Pico della Mirandola's

Detail from the title-page of Erra-Pater's almanac (c. 1535).

Erra Pater.





Oration on the Dignity of Man (and incidentally Hamlet's 'What a piece of work is a man ...') but it triggered off the whole of the Renaissance with a sort of bumptiousness as to man's prowess. Alchemists rushed to animate the Stone and form homunculi, in the light of Hermes' encouragement of man as the maker of earthly gods: 'Even as the Lord and the Father ... is the Creator of Heavenly Gods, so man is the maker of the gods who reside in the temples.'

Hermes explains to a dumbfounded Esclepius that temple statues are imbued with energy and can accomplish an infinity of marvels. They are able to predict the future through dreams and can reward man with joys or sorrows according to his deserts. Man is endowed with godly creative powers. He can transform statues of stone by adding 'virtu' – energies, essences – from magically prepared herbs, scents, minerals and metals, and give them a sort of totemistic power. All this was very anti-church (idols)! Alchemists and magi

therefore kept a low profile, or else, like Cornelius Agrippa, re-interpreted the *Esclepius* statues as dependent on mathematical magic, geometry and optical illusions.

Escorial

The Spanish Renaissance palace complex, built outside Madrid in 1563–84. The secretive Hapsburg Philip II of Spain (reigned 1556–98) had 200 Hermetic books in his library at the Escorial, including John Dee's *Monas Hieroglyphica* and Ramon Lull's *Ars Combinandi*, a sort of *I Ching*-cum-roulette by which the nature of the universe could be divined. Philip was fascinated by Lull early on, good Catholic though he was.

Ether

The fifth element. Aristotle in his *De Caelo* asserted that while the four elements are rectilinear, ether is circular.



Family of Love

An Hermetic sect, formed in Holland in the sixteenth century. The members believed in Divine Illumination and Universal Love, the citizens of the world as one big family united in brotherly love.

Since they did not believe in ritual or dogma of any one particular church, they could participate in any church. Their detractors exclaimed against them in the manner typified by John Rogers: 'They may joyne with any congregation or Church, and live under the obedience of any magistrate, be he never so wicked or ungodly: the Turks, the Pope, or whosoever.'

John Dee was associated with the Family of Love, and frequented a bookshop sympathetic to the sect. His Dutch friends Ortelius and Lipsius were Familists; so were the printers C. Plantin, and Theodor de Bry the Elder. Other Familists were John Everard (1582–1640), the great theological commentator on the *Divine Pimander* and translator of Maier's *Tripus Aureus*, and François d'Alençon, brother to the French King, and Catholic suitor to Protestant Queen Elizabeth I of England.

Farragut (Farrachius or Farradj ben Salim of Girgenti) (thirteenth century)

Jewish translator, the first to concentrate on turning Arabic or Jewish alchemical works exclusively into Latin. His act of devotion was to translate the gigantic *al-Hawi* of Rhazes of Khorasan (865–925) into the *Liber Continens*, at the instigation of Charles of Anjou who had

Right: Christof Plantin, member of the Family of Love, founded in Holland by Hendrik Niclaes c. 1540.

Far right: Abraham Ortelius.



Christof. Plantin. Abraham Ortelius



Farragut receives the Arabic original of Rhazes' *Liber Continens* from an eastern potentate.



Bibliotheca Chemica (1906) is a revised catalogue of over 1000 pages of alchemical books and pamphlets, which, together with the even weightier *Ferguson Collection*, is housed at Glasgow University, where John Ferguson was Professor of Chemistry from 1874 to 1915.

Figulus, Benedictus, The Blessed Potter

The pseudonym of one Törpffer, an 'eremite of Utenhofen and Hagenau', who apparently in his 'untutored zeal ... cherished superfervid hopes that he would reach

become King of Sicily and wanted to expand his culture. Farragut finished the translation on 13 February 1279. The main edition 200 years later weighed 10kg (22lb)!

Faust

A magician who yearned to understand the secret of life, described in countless tales stretching back to before the real fifteenth-century Dr Johannes Faust had even been born! The first literary collection of the Faust myth is *The Faustbook* of Spiess (1587), followed by the play – *Dr Faustus* (1588–93) by Christopher Marlowe, who had discovered Cornelius Agrippa's and Paracelsus's obsession with magical transformations and the alchemical homunculus.

Ferguson, John

A nineteenth-century Scottish academic and bulkiest of the alchemical bibliographers. His

the end of philosophy'. Thus does A.E. Waite dismiss the Blessed Potter, alchemist. Furthermore, 'that impassioned idolater of Paracelsus ... has been cited as a witness to the evidence of secret Hermetic Societies before the first Rosicrucian Manifesto, *Fama Fraternitatis*'.

Faust conjuring up a devil.





Fire

Figulus beat the circuit to Prague and left in his collection of works a most curious example of a Hermetic Mass containing variations in the Introits, Collects, Antiphons and other parts of the ordinary church service. Figulus claimed 'They have become invocations for the gift of Divine Light on the Secret of Philosophy'. Needless to relate, this *Little Three-Part Golden Olympic Treasury* was dedicated to Rudolph II. It would not surprise anyone who knew this devout groveller that he had lifted his Mass wholesale from the *Alchemical Mass* of Melchior Cibinensis. In his preface to his *Little Treasury* the Blessed Potter guarantees rewards to those who help him find Paracelsan manuscripts. Let Paracelsus himself have the last word on pottery: 'Clay does not of itself become a pot.' See also Twelve Heroes.

The *Alchemical Mass* of Melchior Cibinensis



Fire

As said the irrepressible Paracelsus, 'That which the fire operates is Alchemy, whether in the kitchen or in the universe'. In the Renaissance, books on Fire flared up (and flicker still) on arcane shelves: *Pyrotechny Asserted*, *The Philosophy of Fire* and *Aesh Mezareph* (The Book of Purifying Fire), which links alchemy with Kabbalah.

Firestone

The modern alchemist Jack Glass gives the following advice to a novice: 'Aim at the firestone – a stepping stone – first. It will transmute lower metals. Then aim at the Philosopher's Stone. You are at one – you have attained.'

Flamel, Nicholas (d. 1418)

Flamel and his wife Perenelle (flame perennially) were the symbolic alchemical couple.

The real man *did* exist. He was born between 1340 and 1345 at Pontoise in France and was some sort of benefactor. Having moved to Paris, he set up near the cemetery of the Holy Innocents as a notary or scrivener. After a few years he moved with other notaries to a place near the portico of Saint Jacques de la Boucherie. He saved up with Perenelle's help and built a little house opposite the two booths he rented for himself and his copyists. A deed still exists, signed a few years after his marriage, on which each spouse assigned his or her worldly goods to the other.

Here facts cease and myths take over. His work as a public scrivener led him to deal in books, particularly Hermetic ones.

He had a dream that he discovered a Kabbalistic book, the *Book of Abraham* in which alchemical glyphs appeared on every seventh page in the margin, and his job was to find the secret of prime matter, which needed to be decoded from the book.



The dream came true a long time later. Flamel himself describes, in his *Interpretation of Hieroglyphic Imagery*, how he bought, for two florins, a 'very large and ancient gold embossed book' that appeared to be made of leaves of tree bark instead of paper. The cover was 'of copper, finely chased, depicting curious letters and figures' that Flamel could not decipher. 'The pages were written with great skill with an iron stylus in clear and beautifully illuminated Latin characters.'

There were 21 pages, divided into sevens, each seventh page being blank, except for the margins, which were decorated in variations on the serpent theme. The front page announced, *Abraham the Jew, Prince, Priest, Levite, Astrologer and Philosopher ...* then followed curses on anyone who dared to look on the book who was not a priest or scribe (Flamel was). He couldn't decipher much of the text other than that relating to the making of the alchemical Stone, which was relatively clear, except that the nature of the prime matter was left to beautiful but cryptic pictures on pages 4 and 5, which Flamel could not interpret. So Flamel prayed to God (quoted in Manger's *Bibliotheca Chemica Curiosa*): 'May the Great Work that I have to do here below be begun, continued and brought to a right conclusion; may it be mine to enjoy in eternal bliss.'

Since God was not forthcoming, Flamel showed the cryptic pictures to a medical friend, Ansealme, who wanted to see the whole book, but Flamel, abiding by the alchemical laws of secrecy, refrained from admitting that he had it. Ansealme interpreted the illustration misleadingly: the metallic spirit contained a metal known alchemically as 'blood' (e.g. blood of Mercury, of Moon or of Sun), but Ansealme urged Flamel to mix quicksilver with the pure blood of young children. Mercifully, Flamel refused.

Ultimately, Flamel went on a pilgrimage to Compostela in northern Spain, to search for the secret of prime matter. On the way back he met a Bolognese merchant who directed him to a Jewish Dr Canches. On seeing the *Book of*

Abraham, Canches exclaimed that it was the long-lost Kabbalistic *Aesh Mezareph*. Although Canches died before he had completed the journey back to Paris with Flamel, symbolically Flamel had finished his alchemical initiation by the time he was back. He knew what to do to complete the Great Work, even though it took another three years. 'At length I found what I had sought, and I recognized it by the pungent smell!' Flamel completed the Work, understanding now how to prepare prime matter by following the letter of the Book: 'I could not have failed even if I had wished to do so.' He and Perenelle first performed the Lesser Work (converting mercury to silver) on Monday 17 January 1382 at noon and on 25 April that year at 5.00 pm, they transmuted mercury into 'pure gold, very definitely superior to ordinary gold'.

Thenceforward Flamel became extraordinarily rich. Surviving even now are 40 or so deeds relating to his gifts and donations to chapels and hospitals.

Even though Flamel continued to live a careful life news of his wealth reached the King who sent M. de Cramoisy, Chief Tax Inspector, to enquire into Flamel's circumstances. Cramoisy found him living out of the barest earthenware crockery. Flamel sent him away with a flask full of the 'red powder', however, to prevent further kingly curiosity. Some say that Perenelle died in 1397 or 1404 and was buried in the Church of the Holy Innocents, and that Flamel died aged 80 in 1418; that his house, Great Gables, lost its gables but still stood at number 51 Rue Montmorency into the nineteenth century.

An alternative story is that Perenelle was reported dead in order to avoid persecution, and a wooden effigy of her, dressed in her clothes, was buried in one of the chapels that she had helped to build, while she herself disappeared to Switzerland. Flamel requested that he should be buried at her side, and that a pyramid should be erected over their tomb. While all the wood-burning was going on, the living Flamel fled to Switzerland to join his



Fludd, Robert

wife. Some say they both disappeared from Switzerland to India for ever.

Myths persist. Particularly that Flamel was discovered alive and well in 1705 by an Uzbek dervish who described the incident to Paul Lucas the traveller, who wrote about it in his *Voyage au Levant*. The final myth is that Flamel and Perenelle ritualistically enacted the alchemical Operation as part of their life's routine and that they achieved perennial youth and migrated to Asia.

Fludd, Robert (1574–1637)

The Rosicrucian master of cosmology. He was 'made' by Matthew Merian, whose engravings light up Fludd's convoluted *History of the Macrocosm and Microcosm* with exquisite clarity.

He was not so much an alchemist as a theosophist like Jakob Boehme. His output was phenomenal, his vision traditional. This modest man from Bearsted, Kent, codified a system of the universe and man's position in it according to the Neoplatonic hierarchical structure of the elemental world, the celestial world, the supercelestial world. God was in his place, and breathed on chaos to form matter, the elements, man, the animals and minerals. Being at the mercy of James I for support, Fludd Christianized the hierarchies of angels, as Dionysius the Areopagite had done. Having Rosicrucian sympathies, Fludd was in line with Paracelsans like Croll, although he had to defend himself over his beliefs in the weapon salve and less than orthodox remedies, before being accepted into the London College of Physicians.

His *Utriusque Cosmi Maioris* is part theory of macro- and microcosm and part practical handbook. The theory depends on quotations from the Ancients, the *Pimander* (in Ficino's 1463 translation), Boethius and Campanella. He uses quotations to explain, not to clutter, as Burton does in his bulging *Anatomy of Melancholy*. There is a charm about his style. On the practical level, he invites experiments to

test the nature of matter and the elements: 'Make a ball of lead, fairly large ... Let the ball be A, the pipe B, the flask C ...'

It could be a modern science textbook. Here Fludd takes interest in the simple properties of cold, warmth, expansion, density, lightness, in all their myriad combinations. Surprisingly, this work was on the Papal Index of forbidden books.

Fludd travelled on the continent on the fringe of the Secret Societies for alternative education (like Comenius's Academy of Wisdom). Along with Michael Maier and the alchemist Joachim Morsius, he saw the need for new attitudes to education and science. English though he was, his works remained untranslated into his native tongue, apart from his *Philosophica Mosaica* (cabalistic theory of Genesis). It wasn't until 1782 that Adam Booz translated his *Tractatus Apologeticus* into German, and even in the twentieth century, excluding the unreliable analysis of Dr Craven, commentaries on Fludd are few. See also Booz; Maier; Zerotin.

Flying slave

Quicksilver. Things with wings symbolize flying, or the volatile; things wingless symbolize the fixed.

Fombum

The Chinese version of the eternal and indivisible principle in all things, without colour, shape or form. When one has discovered the elixir of life, one can reach this state of belief.

Food

The prime matter essential for transformation in the animal kingdom, including minerals, metals and plants. Paracelsus adds: 'It is an alchemist in the stomach who digests the food consumed by the mouth of man and other animals.'

Fox

According to Chinese folklore, foxes can cultivate the Elixir of Life, and can transform themselves into human beings.



A fox transmogrifying into a man.

Frederick II (1194–1250)

Known as Stupor Mundi, the half Hohenstaufen, half Sicilian Emperor of the Romans, of Germany and of Sicily. Here is not the space to indulge in the whys and wherefores of this calamitous, betrayed monarch, who had his thumb amputated at the joint as an example to his court, and who shut a man in a box to die to see if his soul would come out through a hole in the lid, and who crowned himself at Jerusalem when the Pope excommunicated him for siding with the Muslims.

Fulcanelli



Full of spite and anger at his failures in Germany, yet full of intellectual and occult yearnings, this is the man who founded Naples University in 1194 and who fostered that alchemical adventurer Michael Scot (1175–1235) in Sicily at his chimerical court of polyglots and sages.

Freemasons

The mystical freemasons turned to ancient Egypt for inspiration. Masonic history is vague, perhaps intentionally to create an ambience of mythological origins in the building of the pyramids or Solomon's Temple.

Many alchemists were sympathetic to freemasons who worked on cathedrals and other important buildings in medieval Europe.

Freher, Dionysius Andreas (1649–1728)

A mystical German follower of Jakob Boehme who designed a series of alchemical mandalas for contemplation. In the tradition of Stolcius, Mylius and Vaughan, Freher's emblem-books were never published until Adam McLean undertook in 1984 to reproduce the *Paradoxical Enigmatical and Hieroglyphic Emblems*.

Fugger

An odd word for odd people, conjuring up pictures of Brising-like gnomes forging metals in the bowels of the earth. Said to be the owners of vast mines in Hungary – or, less romantically, the family of Swiss bankers – where Paracelsus was sent by his teacher the Abbot Trithemius to learn the practical art of transmuting metals. Various ramifications of Fugger turn up in the rich metalliferous mountains of Rudolph's Bohemia.

Fulcanelli

The alchemical name of an unidentifiable twentieth-century alchemist, who is clouded in



Fulcanelli

rather unpleasant mystery. Two superb books are written in his name, even though they may have been lifted wholesale from someone else's research. The someone else is René A. Schwaller de Lubicz (b. 1887), himself a fascinating character, a brilliant Egyptologist and Hermeticist. With him the Fulcanelli tale begins.

Schwaller de Lubicz was the bright young son of a chemist, drawn both to Egyptology and alchemy. Some time before World War I, he came to Paris. It appears that he encountered the sinister Brothers of Heliopolis, which were organized by the painter Jean-Julien Champagne, the writer Pierre Dujols, Gaston Sauvage, the alchemist Canseliet and the mysterious Fulcanelli. Fulcanelli exacted an oath of secrecy from Schwaller, now re-named 'Aor' (Light), before telling him that the group was founded on his, Fulcanelli's, ideas.

Fulcanelli then showed Aor an alchemical manuscript that he had removed from Chacornac's bookshop where he worked and asked for an interpretation. Aor found out that it was similar in style to Cyliani's *Hermes Unveiled* of the 1830s.

Accordingly, on the basis of Aor's understanding of the manuscript, Fulcanelli made the 'red powder', and an experiment was performed in 1914 projecting it on to lead to make gold. Canseliet writes in a letter to Jacques Sadoul that it was he who carried out the experiment in his little laboratory at the factory in the (now disused) gas-works at Sarcelles, with two other witnesses: 'Jean-Julien Champagne, who died in 1932, and Gaston Sauvage, who is to the best of my belief still alive.' No mention is

made of either Aor or Fulcanelli being present.

Aesthetically speaking, Schwaller came out of the stable of the poet Oscar V. de Lubicz Milan, who endowed him with his name; but there was something nasty in the stable. After World War I the stable was associated with the Hitler Group, called Les Veilleurs (The Lookout Men, in the sense of vigilantes). René Schwaller, for all his noble culture, was actively and politically anti-Jewish. Maybe he was attracted to the Brothers of Heliopolis because Fulcanelli knew the alchemical secrets of atomic bomb-making. The story now focuses on J.J. Champagne, one of the 'possibles' for the rôle of Fulcanelli.

From January 1925, Canseliet and J.J. Champagne lived as blood-brothers in a sixth-floor garret at 59 Rue Rochechouart, Paris. Champagne was a sickly, leprous alcoholic. But he spouted ideas that were later to appear in Fulcanelli's books, and he spoke in the cant or



Worship of Baphomet, the bisexual Satanic god



argot to which Fulcanelli refers. He lived in abject poverty, experimenting passionately with alchemical retorts on his small kitchen stove. He never went out, yet he received a handsome monthly pension from an unknown benefactor (could this be Aor subsidizing his alcohol and his alchemy?). Canseliet worked at the National Library, doing the research for the two books which were coming up for publication.

Meanwhile, Aor had been researching Gothic cathedral symbolism and had privately lent his manuscript to Fulcanelli for appraisal. Fulcanelli returned Aor's material, advising him not to publish it, as it was too explicit for the Hermetic code of secrecy. Aor accepted Fulcanelli's advice. He went to Switzerland to set up an esoteric community.

Imagine his reaction when *Le Mystère des Cathédrales* appeared in 1926, containing all Aor's ideas on alchemy in the Gothic, published by Schemit in Paris and signed 'Fulcanelli'! And two years later the book was followed by a tome twice the size: *Les Demeures Philosophales et le Symbolisme Hermétique dans ses Rapports avec l'Art Sacré et l'Esotérisme du Grand Oeuvre*. These two books were acclaimed as the work of a master on a level with Eirenaeus. It was Canseliet who arranged for the publication and he who drew the royalties on them saying, 'The author of this book has for a long time not been among us. The man himself has faded out; only his work survives ...' Aor was physically dissociating himself from the Brothers: J.J. was caught up with a Luciferian Society he had formed in Saint-Merry. He had designed a Baphomet for the meeting room where the Black Mass was held. This revolting

hermaphrodite is redolent of Aleister Crowley, the Black Magician, rather than of any Hermetic ideal.

Whoever Fulcanelli was, it was rumoured that Aor invited a 'Fulcanelli', in 1931, to his new laboratory in Grasse to perform a second experiment. How could Fulcanelli be J.J. Champagne, if J.J. – then near death – never left his garret?

This time Aor swore Fulcanelli to secrecy: he held the knowledge of nuclear fission. Although they did apparently perform the Magnum Opus, according to Aor, Fulcanelli died immediately afterward in agony, but handing to Aor the same manuscript he had obtained from the bookshop years before.

Parallel to this, back in the Paris attic, is the other story: that in 1932, J.J. Champagne died a hideous death covered in abscesses and pus, through having betrayed the Brothers with his Lucifer. Canseliet tended his grave in the cemetery of Villiers-le-Bel ultra-carefully. Notwithstanding the grave and its contents, legend is littered with visits by Great Ones incognito. Jacques Bergier is convinced that the stranger who visited him in 1937 was Fulcanelli, and that Fulcanelli's real alchemy was as an 'observer' in a 'field of forces' where he had access to 'realities that space and time, matter and energy normally conceal from us'.

After the War, says Bergier, Fulcanelli became a wanted man. He held the secrets of nuclear bombs and atomic force-fields. He was never tracked down by the American CIA, which hunted him. The very secrecy that is so noble in alchemy, allows for the very fraud that is so ignominious. 'What is truth?' said jesting Pilate; and would not stay for an answer.'



Gabriel

The archangel, who according to the *Zohar*, is the guardian of gold, while Michael guards silver.

John Dee's visionary guide and 'Medicina Dei' was Gabriel, dispenser of the medicine of God, which is variously designated as dew or 'virtu' (essence). In Dee's seances, Gabriel sometimes appeared dressed in a white gown and bearing a Grail-cup. In one session, 'he shewed a Tree, and a great deale of water at the roote'. The water rose up the tree, which swelled and bore fruit: 'great, fayre and red'. Gabriel told Dee that he ate it himself and that 'it lighteneth the harts of those that are chosen'.

Galen (AD 129–199)

A Greek physician-philosopher. The tale goes that Esclepius, god of healing, appeared to Galen's father in a dream, asking him to have his son trained as a physician. That is what he did. The young Galen received his education in the Eastern provinces of the Roman Empire, Alexandria and Rome. Around 159, he had the job of stitching up slashed gladiators; thus he learned practical anatomy. In 164 he became Court Physician for a while to Marcus Aurelius, the Philosopher-Emperor in Rome (whom some say was converted to Judaism by Rabbi 'Prince' Judah).

Galen wrote copiously, not only on animal experiments on the spinal cord, on body fluids, on the pulse and on diet, but also on ancient Greek Comedy, on Plato, Aristotle, Music, Philosophy and Grammar. He believed in a God-ordained universe, which kept him in with the Christians, and popular throughout the Middle Ages. His *Sixteen Books* were gathered by early Alexandrian alchemists into the

Summaria Alexandrinorum, while Hunayn and other Syriac Nestorians conveyed into Arabic his ideas on intelligent purpose and design, which so challenged Rhazes in his *Dubitationes in Galenum*; Averroes in his *Kulliyat* (Colliget), and Maimonides in his 25th *Book of Aphorisms*. In England, Thomas Linacre, Henry VIII's Physician, translated six of Galen's works. His physic was interpreted traditionally, every decision being governed by the almanac, whether blood-letting or curing by zodiacal talismans pinned to the body. The stars had to be considered: 'con' (with) + 'sidera' (the stars) = 'with the stars'.

This is no doubt what Ficino (fifteenth-century inspirer of the Hermetic Renaissance with his *Pimander* translation) was referring to in his book on astral magic, *De Triplici Vita* – when your body is depressed (too much Saturn) give it a bit of joviality (Jove). Draw down Jove's influences by pinning a picture of Jove's magic square on the wall. See also Erra-Pater; Jupiter; Physic; Pimander; Planets; Zodiac.

Galut

Exile or persecution. The word is found in Kabbalistic works, like the *Zohar*, to refer to Jews.

Gassendi, Pierre (1592–1655)

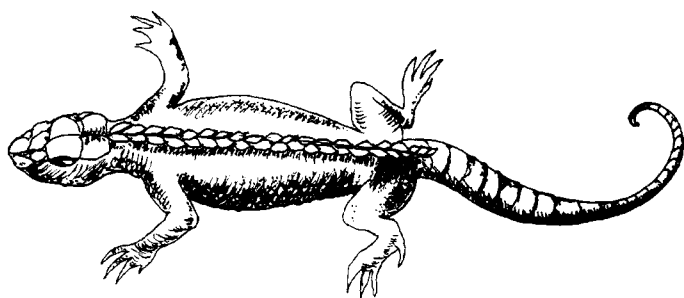
A philosopher and arch-sceptic. Tales abound of John Dee's scribe, Edward Kelley, transmuting the Stone all over Bohemia after Dee's departure on 11 March 1588. Gassendi has been cited as witness to Kelley's projections at the House of Tadeus Hajek, Imperial Physician in Prague.

Gassendi wrote dismissively in Latin of quacks and forgers of alchemical literature and a line or two on Kelley, who 'infused a single tiniest little drop of very very red liquid on to a pound of mercury converted into gold' with trace results.

But although Kelley may have been projecting regularly up to May 1591, Gassendi

Galen, after a detail on the frontispiece of Guillemeau's *Anatomy* (Paris, 1586).





Lizard, from Gesner's *Historiae Animalium* (1551–87).

was not born until 22 January 1592; his *De Rebus Terrestris Inanimis* containing his caustic comments on alchemy was not published until 1658 (posthumously). It is inconceivable that the poor French boy, miles away in Provence, would have witnessed Kelley (who, at a pinch of Rudolph II's snuff might still just have been alive in 1597) or had the mental nous, aged five, to comment on his transmutations.

It is even less likely that the mysterious 'Gassendi' refers to the physician Konrad von Gesner, Swiss 'monster' of encyclopedantry, who (although he had met Dee in 1563) was well and truly dead by 1565, in which year the plague snuffed him out – in action, as it were, with his patients. See also Kelley; Scryer.

Geber

A composite, not an individual, alchemist; a medieval *Corpus*, largely collected in the minds of Latin scholars and coming to rest in the *Bibliotheca Chemica Curiosa* of Manget in 1702. Geber, not to be confused with the real Jabir ibn Hayyam, eighth-century alchemist at the court in Baghdad of Harun ar-Rashid, amassed a huge body of literature in his name: *The Book of 112*, *The Book of Seventy* (translated into Latin by Gerard of Cremona in the twelfth century), *The Book of Mercy* and the *Summa Perfectionis*, which turned up in the *Pretiosa Margareta Novella* anthology of 1557.

The *Summa* contains excellent working descriptions of the chief practical operations of alchemy and of nature, and the use of apparatus. It also details the impediments in the way of a disciple of alchemy, which may be

infirmities of body or soul, for instance, 'decrepit old age' or 'a brain repleat with many Fumosities' (from Richard Russell's translation in 1678 of *The Works of Geber, the Most Famous Arabian Prince and Philosopher*). It answers the Schoolmen who object to alchemy:

Nature perfects metals in a thousand years; but how can you in your artifice of transmutation live a thousand years, seeing that you can scarcely extend your life to a hundred? Answer is made: What nature cannot perfect in a very long space of time, that we compleat a short space by our artifice; for art can in many things supply the defect of Nature.

Gemma Augustea (The Noble Stone)

Rudolph II's prize exhibit in his court Lapidary of precious stones and rock crystals, talismans and glyptics. Supposedly, the Gemma Augustea was imbued with occult powers, but actually it was stolen goods. Smuggled from Paris in 1591, it was bought by one of Rudolph's dealers, David von Brüssel, and delivered to this bedazzled emperor in Prague, whose obsession with miracle cures from gemstones and alchemy was equalled by his obsession with his illnesses, bequeathed to him, perhaps, by his certified-schizoid mother. See also Rudolph II; Wunderkammern.

Geonic (plural Geonim)

The adjective from the Hebrew 'Gaon', excellency; used in the context of Geonic literature, or Geonic period in the history of the Jews in Babylon (589–1038).

The Geonim were the Elders of the two great Babylonian Jewish Academies established at



Ghayat al-hakim

Sura and Pumbeditha in AD589. Their job was to carry on the interpretations of the Talmud that had recently been edited (500–588) by the Saboraim of Babylonia.

Some astonishing alchemical Kabbalistic books arose in the Geonic period. One was *Shi'ur Komah*, a treatise on the bodily dimensions of God; another was the *Sepher Yetzirah* (Book of Creation).

Ghayat al-hakim (The Final Aim of the Philosopher)

A book ascribed to the tenth-century Spanish Arabian, Maslama ibn Ahmad. Translated into Latin and Castillian as the *Picatrix*, it was universally circulated in the medieval occult world, with its mélange of incantations from all manner of sources, including Persian, Hebrew and Greek.

Surprisingly little has been made of this handbook that no angel-conjurer could be without! De-mystify Pico, Ficino, Trithemius, Cornelius Agrippa (who used it in spite of official warnings not to) of their 'astral magic' and it comes down to the *Picatrix*.

Even Rudolph II in Prague had one of his necromantic stooges chant snippets from it at his usurping brother Matthias. Whatever the efficacy of the *Picatrix*, truth it is that seven years to the day after Matthias seized Rudolph's crown in 1612, he got his come-uppance: his lieutenants were defenestrated from the Chancery windows by the populace and overthrown. See also Cornelius Agrippa; Dee; Maslama ibn Ahmad al-Majriti; *Picatrix*; Rudolph II; Trithemius.

Gibberish

That this word has come to mean 'twaddle' reflects ironically on the annals of alchemy. The word is derived, via garbled paths, from both 'Geber', the composite alchemist, and 'gharbala', Arabic for 'to sift the fine from the coarse', a description of what alchemists are supposed to do.

Gluten

In its more sticky form, one of the symbols of Mercury, which is 'mother of minerals and metals and their first matter'.

Gnostics

Adherents of a semi-Christian faith originating in Egypt and rooted in magico-alchemical traditions. They refused to accept that God had made this wicked world and settled in Byzantium in the early Christian era.

Their various sects were expelled from Christendom for their dualistic belief that the visible world was created not by God but by the Demi-Urge, a type of angel a good way down the ladder between God and created beings.

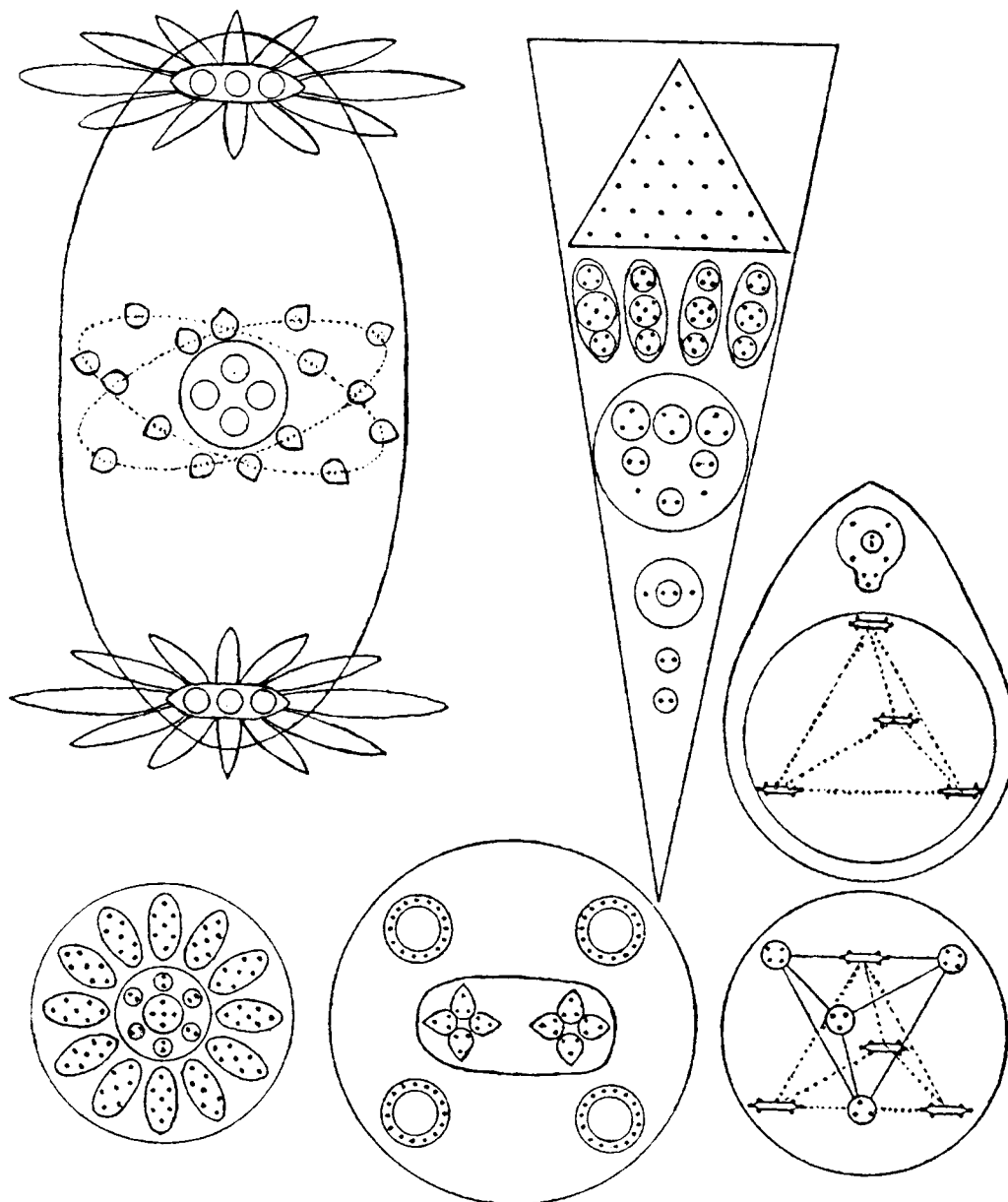
Goetic

'Necromantic', 'spell-binding', one of the suggested origins of 'Gothic', along with 'argotique' (cant or secret alchemical language, used by the sailors of the ship *Argo*), 'art gothique', and 'goatique' ('Ar-Goat' in Celtic is 'country of trees' and in all Celtic languages trees mean letters).

Druidic colleges were founded in woods, and Gothic cathedrals are on Druidic sites. The vaults close over like trees, and take us back to the 'envoûtement', 'envoluting' or magical power of 'goetic'.

Gold

The only perfect metal with all parts in balance, with equal proportions of Sulphur, Salt and Mercury. Symbol of transforming man and nature, gold was the highest aspiration of medieval alchemists, but, say they darkly, 'aurum nostrum non est aurum vulgi' (our gold is not the gold of the common herd). The male principle in the *prima materia*. See also Philosophic Mercury, Salt and Sulphur.



The atomic composition of gold, as seen in trance by Annie Besant and colleagues.

Golem

An artificially-created being. The Kabbalistic alchemists were fascinated by the idea of creating life alchemically, without the help of women. After all, Eve was part of Qlipoth, the sinful world. Was not Adam made by God of clay, of 'kemi', *prima materia*?

The Hebrew word 'golem' is found only once in the Old Testament, where it means 'human embryo'. In Jewish midrashim (commentaries) 'golem' came to be applied to an artificially created being, a homunculus; usually, but not always, dumb and sometimes intelligent, and always possessed of great physical strength.



Greatrakes, Valentine

The legendary golem is made of clay by a wonder-worker (alchemist, potter, metallurgist, magus) and endowed with life by the word of power, Emeth, and returned to clay by the word Meth, or 'death'. Meth was used when the golem became so strong that it threatened its maker.

There are various tales of golems that hark back to the life-giving rituals of certain Jewish alchemists and sages in Prague and Spain during the Middle Ages. One such golem was supposedly made by Rabbi Judah Loew of Prague in the sixteenth century. There were certain twelfth- and thirteenth-century Kabbalistic alchemists who followed ritualistically the text of the *Sepher Yetzirah* (The Book of Creation) in which life is conferred upon a clay puppet.

Golem or homunculus



The adept, at the end of an advanced stage along his mystical path to enlightenment, would make a foetus-figure from clay and bury it in the earth, the 'kemi', Adamic soil, or he might form a manikin from virgin soil. Then he would walk round it clockwise, chanting various magical formulae of number-and-letter combinations derived from the *Sepher Yetzirah*. This endowed the creature with symbolic life, which could later be taken away by a widdershins walk round the site of the manikin. These rituals were combinations of the adept's advanced progress towards God.

Greatrakes, Valentine (seventeenth century)

An Irishman, famed throughout England for his curative powers and laying on of hands, which his grateful clients witnessed as some kind of alchemical transmutation within their rheumatically bones. Valentine was able to get a patient to stretch out his arm and keep it still for hours under his hypnotizing and healing hands.



Valentine Greatrakes
laying on of hands



His detractors called him an impostor, who pretended to cure all diseases by stroking his patients. He occasioned very warm disputes in Ireland in 1665, and in England in 1666 'on his examination before the Royal Society'.

Grimoire

A book of magical spells; anything from the Macbethian 'eye of newt, and toe of frog' variety to the much more sinister invocations to the powers of witchcraft used by John Dee and bad popes. *Grimful* rather than *graceful*.

Grosseteste, Robert, Bishop of Lincoln

(b. 1168, Stradbroke, Suffolk; d.1253 Buckden, Hunts)

A tolerant, wise, enlightened bishop, who actively saved groups of Jews from massacre in England. Grosseteste was a major force in the education of Roger Bacon, and a struggling student of Hebreo-Arabian philosophy. He had a quaint Old Testament consisting of a literal translation into Latin from the Hebrew, to help with the Hebrew grammar.

He had a love of classical Greek, which he introduced into Oxford University, where he

became Master of the Schools, and Lecturer to the newly arrived Dominican and Franciscan friars. For a bishop, he was slightly unorthodox, being an ardent follower of Dionysius the Areopagite.

Guarinoni, Hippolytus (1571-1654)

The son of one of Rudolph II's physicians, Guarinoni brought up by Jesuits in Prague. He wrote a giant phantasmagoria of German outpourings on alchemy and moral decline. He inveighed against quacks and the denobling of the alchemical science. He dedicated to Rudolph II his book of supernal size and massive title (here summarized!): *Die Grewel der Verwüstung Menschlichen Geschlechts Neben vor- mit- und nachgehenden so wol Natürlichen als Christlich- und Politischen darwider streitbaren Mitteln*.

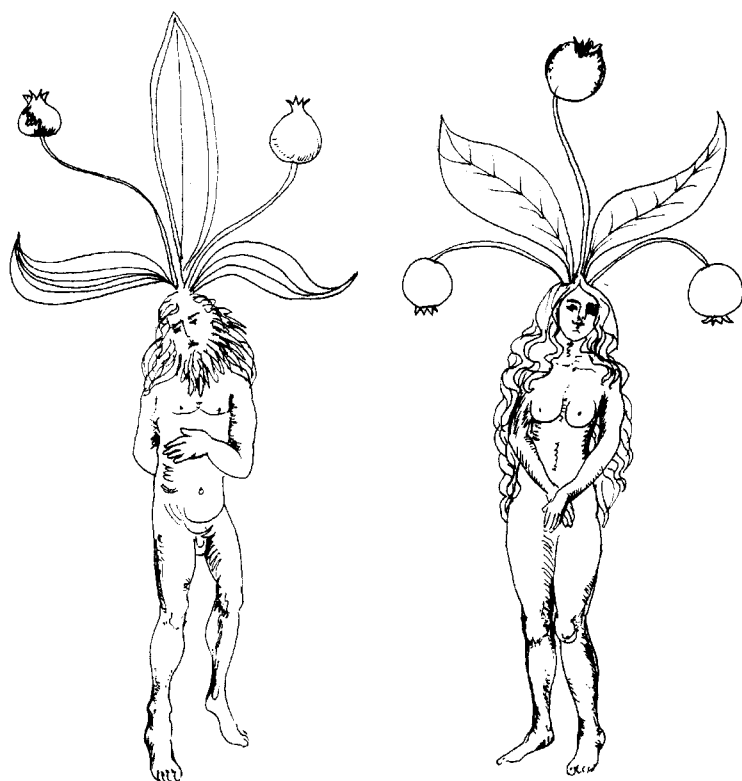
Gymnosophists

According to Michael Maier, an ancient Ethiopian Hermetic brotherhood, forerunner of the Rosicrucians, which practised alchemy. Whether the sages were naked or the Truth was, Maier does not elaborate on!



Hahnemann, Samuel (1755–1843)

The father of homeopathy, by default. He was born at midnight on 10–11 August 1755 in Meissen, where his father had migrated to work in the local porcelain factory, founded by the alchemist Johann Böttger.



Male herb and female herb, after a woodcut in *Hortus Sanitatis* (Mainz, 1491).

Hahnemann trained in the Classics and earned his living as a translator, a transformer of codes, interpreting and potentizing dull chronicles, and putting energy into the core material.

He spent his life trying to establish credibility as a physical scientist, but had more in common with Steiner and Jung, his spiritual successors, than modern medicine. He could

not come to terms with professional medicine. He questioned methods of diet and hygiene, and provided inspired, unorthodox cures, which alienated physicians. He could not accept Paracelsus because he did not believe nature expressed itself in occult signs. Yet he was convinced of Paracelsus's law of similarities and considered practising the law alchemically. His great work, *The Chronic Diseases*, is deeply pessimistic; Hahnemann doubts there are any lasting cures for mankind.

Single-mindedly piecing together research from ancient alchemical, medical and botanical texts, Hahnemann developed his own system of homeopathy. But he was out on a limb, a *petit prince* from another planet – brilliant yet bizarre.

He died mocked and unmourned on 2 July 1843. Unlike alchemists, Hahnemann refused to connect healing with mind or spirit. He conceived his system as physical: the hierarchy of plants, animals, people and, beyond these, oscillations, energies and vibrations. He did not see the metaphysical correspondences between the worlds of God, gold and sun, and the world of minerals, plants and man. Nonetheless, his system of potencies, which he insisted on calling 'medicine and science', was really more akin to the higher realms of Jungian archetypes.

Ha-nasi, Aaron ben Samuel

A ninth-century Babylonian Jew, who transmitted the Geonic Kabbalah to Europe, by conveying his teachings to the famous Kalonymides family when he emigrated to Italy. See also Kalonymides.

Helvetius, Johann Friedrich

(b. 1625, Duchy of Anhalt; d. 1709, The Hague)

The personal physician to the Prince of Orange in the Netherlands. His true name was Schweitzer, which, like the Latin form 'Helvetius', means 'Swiss man'. Suspicious of alchemy, he kept up a running battle with Sir

Baruch Spinoza,
arch-sceptic



Kenelm Digby who turned up at the prince's court with a 'sympathetic powder'.

Like Van Helmont and Boyle, Helvetius was another respectable scientist who was visited by a nomadic alchemist. Helvetius' particular pock-marked stranger tricked and teased him with some specks of transmutatory powder, coming and going a couple of times – enough to whet Helvetius' curiosity – before disappearing 'to the Holy Land'. Helvetius and his wife put the powder to the test: protecting it in wax before dropping it on an old piece of lead piping heated in a crucible and finding, after lurid colour changes and loud hissings, that the piping had all turned to gold within a quarter of an hour.

Meticulous records of this alchemical escapade were kept by Helvetius, including the testing by the silversmith Brechuil and the Master of the Mint who, along with other metal-workers, had to admit that the 'gold' made was heavier after their testing than before. It was the talk of all The Hague. Even Spinoza, cynic of cynics, writing to Jarrig Jellis, had to accept Helvetius' evidence. Helvetius'

report was published in his *Vitulus Aureus* (The Hague, 1667), and also in Manget's *Bibliotheca Chemica Curiosa* (1702). All very plausible; except that the *Vitulus* appears in Harley MS 6485, as a letter to John Dee, who was dead by half a century.

Heptaplus

A cabalistic interpretation of the Torah, especially of the Creation, by Pico della Mirandola. The work was published on 9 March 1489, and when the Pope objected to it, Pico said it was an aberration of youth.

Pico della
Mirandola



Herings Law of Cure

In homeopathy and alchemy, the Law says that the symptoms move from within to without, from above to below, and from time present to time past, in the reverse order from the one they established themselves in first, in the diseased body.

Herm (plural Hermae)

Stone pillars – all phallus and head – of Hermes, which stood in front of doors and public places in Athens, and were regarded as

Herm





Hermaphrodite

symbolic of the God's protection. Their mutilation was thought an act of terrible impiety and an omen of disaster.

Hermaphrodite

The son of Hermes and Aphrodite, who welded himself together with the water-nymph Salmacis. Alchemically, Hermes undergoes a sex change as he rises and becomes the volatile female Mercury to conjoin with Sulphur (male) in the hermaphrodite. See also Androgyne; Rebis.

Hermaphrodite



Hermes

The one who started it all, the winged messenger of the gods who flies up and down through two worlds – 'as above, so below'. His wings span Egypto-Hebrew-Greek and Roman occult philosophies. He is the Egyptian Thoth, the God of hieroglyphs or letters, and his alphabet metamorphosed into the Jewish Tarot, while his job identified him with the Roman newsboy Mercury and his quick-as-a-flash nature with quicksilver.

Hermopolis

The chief site of the cult of Thoth/Hermes in Egypt. The burial-complex at Hermopolis (the modern Tuna el-Gebel) contains the tomb of Petosiris, High Priest of Thoth. Tunnels of tombs for the ibises and baboons sacred to Thoth are still to be found beneath the sands.

Homunculus

The little manikin that Paracelsus and others claimed to have made from semen and various metals. The symbol of transformation from non-living to living. The making of men from semen or stone was a recurring Freudian absorption long before Freud.

Horapollo of Nilous, Upper Egypt

The author of the fifth-century AD *Hieroglyphika*, which was even then one of the few surviving books on the Egyptian hieroglyphics before the world they represented was submerged in the Dark Ages. In his name 'Horus', the hawk-headed Egyptian deity, combines with the Greek sun-god Apollo, both aspects of Thoth or Hermes, as god of Magical Arts.

The *Hieroglyphika* was brought to Italy in 1419 by scholars who anticipated the downfall of Byzantium and translated it from the Greek. As an interpretation of the 'sacred letters' the text became wildly popular and acquired magical significance among Hermeticists, at first in the Florentine School around Cosimo de Medici, and then all over Europe. The glyphs became the basis for alchemical emblems and for talismanic names of power. Oswald Croll identifies hieroglyphs as the Sacred Language of Thoth: it is the key to the correspondences of the worlds ('as above, so below'), but a language we have lost and need to find.

Hopitots

Routes used by pilgrims to Jerusalem in the crusades, guarded by the Knights Templar.



- 1 Horus the guardian hawk at the temple entrance of Abu Simbel, Egypt
- 2 Horus in the tomb of Senajem, a nobleman
- 3 King Chefred (2520–2494BC) deified with Horus

Humid Path

The Humid Path or Discourse on the Vegetable Menstruum of Saturn by Edward Kelley was probably written in prison near Prague c. 1592–3. The text was dedicated to Rudolph II, 'the most potent Lord of the Holy Roman Empire' (in the hope that Rudolph would release him from prison?). It was published with two other alchemical texts by John Lilly and Meric Casaubon, 'from a manuscript,' adds Kelley, not confessing whether it was his own, or from Dee's or Rudolph's library.

Nonetheless, contained within its 53 pages is the most lucid narrative of the what, the why and the how of alchemy: philosophers have always sought 'a sound mind in a sound body' which is attainable by the 'royal road' of alchemy. The mind is 'the most celestial ... omniscient part of man, being receptive of God' but the body is a 'dunghy workshop of frail clay'. In order to refine it, the sage needs to study how Nature separates, purifies, then reconstitutes matter. He must study 'the elements of the human body and of the universe generally'. Kelley shows 'our Art is no Utopian dream', and that is proved by 'the innumerable and stupendous metamorphoses which Nature daily exhibits'.

Kelley explains that Mercury, a common denominator found in all metals, is a 'shorter

cut' than Nature's 'round-about' road to perfection, for, once purified, Mercury can act on everything else and purify it. Along with Sulphur and Salt, Mercury interacts at all levels within the elements of the universe: 'This is the universal sperm of Anaxagoras, who said that all things had the same first substance.'

As a purifying agent, ordinary mercury could be used, says Kelley, but that would take too long. Ideally, mercury that has been animated or quickened by fire is needed. 'Only vigorous and exuberant Mercury is really suitable for our purpose. Mercury must be fixed by means of its own inherent sulphur, acted on by external heat ... This heat proceeds from the heavenly bodies.' The action of different heavenly bodies produces different metals: Saturn governs lead, Jupiter tin, Sun gold, Venus copper and so on.

Before showing us how to prepare this special Mercury, this 'Stone' of Mercury, Kelley examines conflicting theories of narrow-minded alchemists who think 'their one little branch is the whole tree of Philosophy, and thus have obscured the entire garden of the Hesperides with the fumes of their ignorance'.

Then Kelley turns to preparation of the Stone, the Tincture and Potable Gold. His language now involves planetary symbolism, for the alchemist needs a 'profound insight' into the correspondences between the sublunar



Hunayn ibn Ishaq and Ishaq ibn Hunayn

world ('as below') and the cosmic ('so above'). See also Kelley; Rudolph II; il Zoppo.

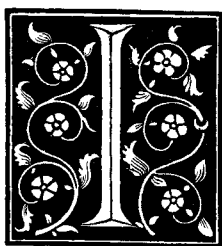
Hunayn ibn Ishaq (808–873) and
Ishaq ibn Hunayn (d. 910)

This father and son were, two beacons for all times amongst alchemical translators. The Syriac Nestorian, Hunayn, not only worked in Baghdad as physician and court librarian under the enlightened Caliph Al Ma'amun but also travelled throughout Syria and Palestine to Alexandria to gain medical knowledge. He transmitted Galen to the Orient, making available Arabic versions that had hitherto only been in Syriac. He corrected the faulty existing Arabic edition of Dioscorides and established exact texts without being starkly literal.

He translated Aristotle's *Categories*, *Physics*,

and *Magna Moralia*. His *Ophthalmology* and translation of Hippocrates's *Prognostics* form the basis of the oldest Arabic medical encyclopedia that Hunayn's contemporary, al-Tabari, compiled.

Hunayn's son, Ishaq, continued his father's translations from the Greek into Syriac and Arabic, and brought out his version of Aristotle's *Metaphysics*, his *De Generatione et Corruptione*, and his immensely popular *De Anima* (Aristotle's three-tier system of the Soul). Not only this, but the Hunayn team translated Plato's *Republic*, *Laws* and the *Timaeus*, which was the supreme source of inspiration for alchemists of all later generations. See also Arabic; Aristotle; Baghdad; Caliphs; Dioscorides; Nestorians; Syriac.



Iamblichus (b. 242 Chalchis, Syria; d. 326)

Pythagorean and mystic alchemist. Educated first by the visionary Bishop Anatolius of Laodicea, he then moved to Tyre and Rome where he studied under Porphyry the Neoplatonist (himself a pupil of Plotinus). Iamblichus turns to the Masters themselves for first-hand philosophy: to Plato's *Phaedo* for arguments in favour of the philosophic life; to Plato's *Republic* for the Cave of Ideas and the Myth of the Sun; and to Aristotle's lost *Protrepticus* for validation of a life of contemplation. Some of Iamblichus's notions are akin to the Gnostic 'evil' of the body versus the 'good' of the unseen spiritual world.

For adepts of ritual Egyptian magic, Iamblichus' most influential work, *De Mysteriis Aegyptiorum*, stands as an answer to – virtually a rival to – Porphyry's *Letter to Anebo*, which queries the logic and efficacy of a system that is magically based. In the *De Mysteriis*, Iamblichus's own version of the High Priest Anebo answers the character Porphyry's questions on the nature of the Egyptian priesthood, of invocations and incantations, of initiation through discarnate beings, and the changing nature of the initiate receiving different powers from the 'otherworlds'. The whole discourse is remarkably like a modern handbook for training in psychic mediumship, with a solid grounding in what should be undertaken through 'mind' (left-brain) in connecting with divine energies and what could be entrusted to outside-time intuition (right-brain). Ultimately the message of the *Mysteries* is that whatever you put in, so you get out: if daemons you invoke, you will get back energies of the physical appetites you invoke; if you invoke angels, you tune into the levels of intellectual contemplation; if you invoke God, you receive liberation from the world of

passions and final Bliss will be received.

Ficino quotes Iamblichus, and John Dee had his works in his library, but to many alchemists the *De Mysteriis* was not as familiar as the *Pimander* and the *Esclepius* were. The *Mysteries* could not be infused with Christian Platonism as could the *Corpus Hermeticum*, so both Dee and Ficino took the risk of being branded as Black Magicians or burned at the stake as Bruno was in their wake. See also Bruno; Dee; Esclepius; Pimander.

Iatrochemistry

Paracelsus's own brand of chemotherapy; the alchemical preparation of healing remedies, largely inorganic.

Ibimorphic

In the form of an Ibis, sacred to Thoth or Hermes.

Ibis

Thoth, the Egyptian God of Letters and Sacred Arts, is symbolized as an ibis-headed man and intimately connected with a number of lunar functions, cycles of time, measure and movement. At Hermopolis, Thoth was called the Master of the City of Eight, the Ogdoad.

Ibn Arabi (1165–1240)

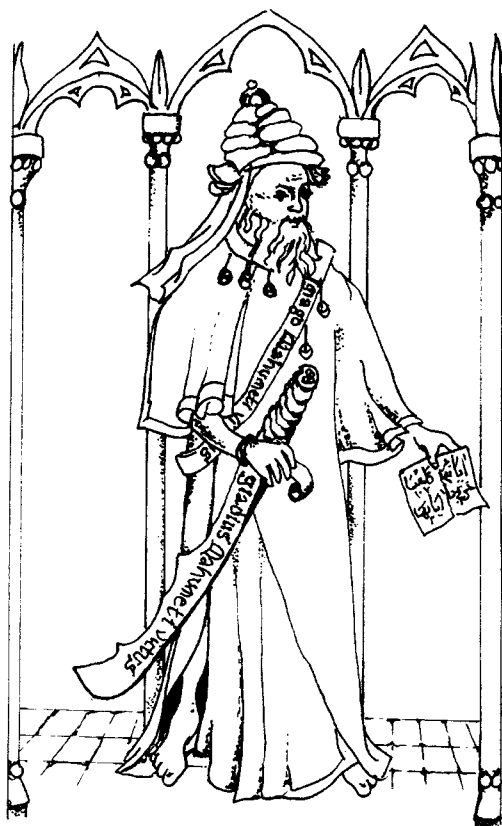
At the age of eight Ibn Arabi was studying in Seville all there was to know about science and all there was to know about the Koran. He travelled widely, learning the secrets of the Magi, and the alchemical Great Work in Syria, Egypt, Anatolia and Mecca. He finally died in Damascus in 1240, leaving a huge literary output. He is best remembered for his two mystical treatises, *al-Futuhat al-Makkiya* (The Meccan Revelation) and *Fusus al-hikam* (The Gems of Wisdom), which centre on Ibn Arabi's theory of the Logos, not the four-letter holy word but the 22 variations on the theme of God

Thoth with an ibis-head, cradling the moon.





Ibn Wahshiya



A likeness of Mohammed with his sword of victory.

in the Universe, God or the Universe, God equals the Universe. Mystically the Logos expresses the reality of Mohammed. Each prophet is a Logos, but Mohammed is *the* Logos. Mohammed is the cosmic principle. He is the Perfect Man (al-Insan al-kamil), a theme popular with Algazel. Ibn Arabi had already written on this same theme. He speculates on the essence of the Perfect Man: body, spirit, wisdom, his part in the universe, his nature as the mirror of God. See also Algazel; Damascus.

Ibn Wahshiya

A tenth-century Babylonian agriculturalist and celebrated collector of 'ancient' manuscripts and alphabets. He pretended to have discovered a mass of alchemical writings by the ancient Babylonians, ancestors of his own race, the Nabateans, who were culturally superior to the Arabs.

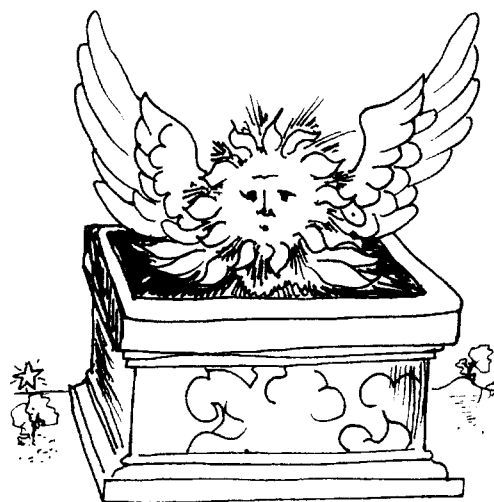
His most celebrated 'discoveries' are his *Book on Babylonian Astrology* (with its system of decans) by one Tankalusha (Teucer). He also wrote *Nabatean Agriculture* and a *Book of Poisons*, probably all his own work, and certainly all were popular sources for medieval alchemical ideas on prime matter and cosmology.

Ijaza

The licence granted to a Muslim sage to teach a given document in his name. It applied to the wandering scholars and alchemists over Europe, who might acquire anonymous manuscripts which they wanted to use.

Illuminatio

A member of an alchemical sect founded by Dom Pernety in 1779 and known as the Illuminated Brotherhood of Avignon.



Illuminatio – alchemical symbol for psychic rebirth.

Imhotep (27th century BC)

In Egyptian myth, the deified architect of King Zoser of the Third Dynasty (reigned 2630–2611 BC), famous for his Step Pyramid. He was the patron of science and medicine and has been



identified with Esclepius, and with one of the Memphis triad: the son of Ptah and Nut. He is celebrated as the prototype of creative genius. Some say he was the inspiration for the brotherhoods of alchemist-masons of Gothic cathedrals.

Indigo

Grey-violet, which, according to Aristotle, is the emblematic colour for mercury, and the colour of the St Christopher at Notre-Dame in Paris. Just as mercury is the odd one out of the seven primary alchemical metals (gold, silver, copper, tin, iron, lead – and mercury), so indigo is the odd one out of the colours, being neither a primary nor a secondary colour.

Mercury and indigo have parallel positions: mercury as the source of all the primary metals; indigo (representing white light) as the source of the prismatic colours.

Inquisition

The KGB of former times, the Inquisition was unalloyed evil, the Hound of Hell, hunter of alchemists, tracker and liquidator of anyone guilty of practising the 'Magical Sciences', whether the Cathars in Toulouse in 1179 or Bruno in Venice in 1600.

In Spain, the Inquisition tribunals started formally in 1458 under Ferdinand and Isabella, in the shadow of Tomás de Torquemada, the first Inquisitor-General. But in effect, persecution of this or that unorthodox group had been happening for centuries, particularly the galut of Jews after the sack of Muslim Toledo in 1085 by the Christians. See also Bruno; Galut; Stake.

Insan-i-kamil

The initiate or enlightened man; the alchemist who has arrived, who has transmuted dross to gold. In the words of Ismael Hakki Bursevi: 'The initiate, the saint, the insan-i-kamil, is he who possesses the faculty of being able to

recognize the true non-existence of his faculties of thought.'

Iosis

In Alexandrian alchemy, the fourth and final process in the production of the Stone, whereby the metals change both their colour and their substance. The first stage is melanosis the blackening, the producing of the black metal from the prima materia; the second stage is leukosis, the whitening or silvering (changing to silver) of the metal; the third is xanthosis, the yellowing or gilding; the last is iosis, the purpling or spiritualizing of the metal, so that there is little, if any, 'body' left. The more intense the colour, the more full of 'spirit' the metal and the less of 'body', so the more power it has as transmutatory Stone. This alchemical Stone was thought of as alchemical sperm.

Toledo: a detail of a synagogue with Hebrew and Arabic inscriptions. It was deserted after the Expulsion of the Jews in 1492, until the Christians took it over in the following century. It has remained in use as a church ever since.



Isaac of Kairouan (c. 855–955)

The first of the post-biblical Jewish philosophers who culminated with Maimonides in the twelfth century. Isaac trained in the magical desert-complex of Kairouan (in Tunisia) before travelling to Alexandria and



Isaac the Hollander

probably further afield, practising as an alchemist-physician.

He was of enormous influence on later thinkers of the major monotheistic religions: Muslim, Jew and Christian. He particularly inspired Gerard of Cremona (1114–81), that inveterate translator of scientific and alchemical works (from Italian and Latin to Castillian, Arabic, and Hebrew); Albertus Magnus; Siger of Brabant; Maimonides; and Nicholas of Cusa; and influenced, even if negatively, Thomas Aquinas.

Isaac wrote *On the Elements*, an exposition of Aristotelian physics, and a *Book of Soul and Spirit*, which contains the Kabbalistic notion of God's emanations or 'splendours': the first 'splendour' creates the Rational Soul; from its emanation comes the second 'splendour' giving rise to the Vegetative Soul; and from that develops the material world.

Isaac the Hollander (fifteenth century)

Isaac and his son were followers of Geber, whose alchemical experiments are said to be amongst the most explicit in the whole range of Hermetic literature. Their lives were buried in the obscurity necessary to adepts; they spent their whole time in the laboratory, quoting no-one later than Arnold Villanova. Apparently they were acquainted with 'aqua fortis' and 'aqua regia' (royal water), which were discovered in the fourteenth century.

They affirmed that the Grand Magisterium (transmuting agent) would convert a million times its own weight into gold and that those who took a small portion of the Philosophical Stone weekly would be preserved in perfect health to the last hour assigned to each by God.

This is just what the *Geber Corpus* claimed, according to A.E. Waite, and no other alchemists have established the transmuting capabilities of the Stone on such a large scale.

The *Opera Mineralia* or *De Lapide Philosophico* by Isaac shows that they worked in metals and understood the manufacture of

enamels and artificial gemstones. The treatise centres on the art of 'extracting dead and impure metals into true Sol et Luna'. Their 'Saturn as the First Matter' is probably Philosophical Lead, although the details as to what their 'De Triplici Ordine Elixiris et Lapidis Theoria' or their 'Libelli Secretissimi' might be are obscure.

Bernard of Trevisa is said to be a contemporary of the Isaacs, who performed their *Magna Opera* successfully and successively, while Bernard was worrying for the Stone all his life. Paracelsus is supposed to have derived his principle of Salt from the Isaacs.

The *Opera Mineralia* appears in *Theatrum Chemicum* Volume III, edited by Zetzner at Ursel (1602). See also Bernard of Trevisa; Geber; Lion.

Isidore, Bishop of Seville (560–636)

Hugely influential among scholar-alchemists in Spain, France, Italy, and then Germany after his works burst into print in Augsburg in 1472, Isidore did more than anyone else in his era to save ancient knowledge that was beginning to disappear from the West. In the monastic tradition of Cassiodorus before him, he synthesized, collated and classified a huge amount of learning into his encyclopedia, the *Originum sive Etymologiarum*, which was said to contain plans for a complete medieval university system.

Isidore is full of naïve curiosity about the origins of language, particularly Hebrew and sacred alphabets (he personally was restricted to St Ambrose and St Jerome); the origins of geometry in the Nile delta; the nature of prime matter and Aristotle's theory of the four elements, metals, alloys and mining.

The marvellous thing about his works is the life Isidore infuses into his diagrams with which he explores Natural Science. He sees metals as having a life of their own; having been formed from vapours and coagulated with earth, they have a growth and a death. His cosmology and his elements are organic,



interlinking macro- and microcosm 'as it were, by arms' (*quasi quibusdam duobus brachiis*). His medical wisdom influenced Gundisalvus, the great twelfth-century Spanish churchman and accessor of Arabic and Latin alchemical texts. His encyclopedic scope impressed Bartholomew (and his editor Batman), while his visual conception of the inter-changeability of the elements seized the imagination of Giuseppe Arcimboldo (1530–93) and Mannerist painters.

Transmogrified by the alchemical minds of the Renaissance, Isidore's *Etymologiae* appeared in print in 1472 and ran to at least ten editions in the next century, while his *De Natura Rerum* was also printed in 1472 as *De Responsione Mundi et de Astrorum Ordinatione* with his sketches transformed into woodcuts. See also Batman.

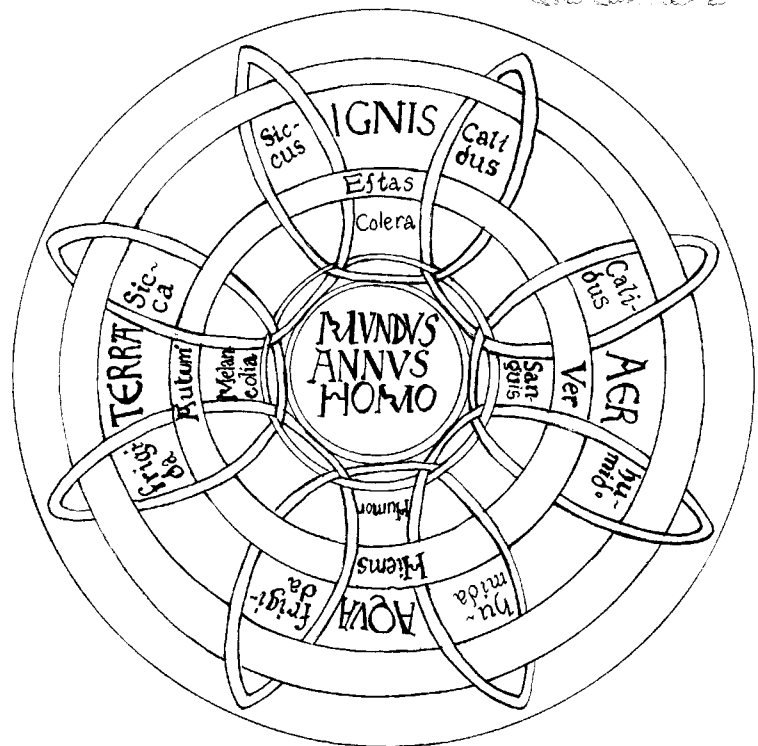
Isis

The mother, wife and sister of the Egyptian gods. She is the Moon-goddess, whose conjunction with Osiris, the Sun-god, gives rise to all things.

In alchemical symbolism, Philosophic Mercury was disguised as Isis, Luna, Queen, Sister, Eagle, Serpent and Winged Dragon.

IWNW

The Egyptian city of Ra, the Sun Cult. In Greek, IWNW was Heliopolis, now a suburb of Cairo. Hermetic texts repeatedly refer to this perfect city as an ideal model for the universe or a heliocentric system of planets. Campanella based his City of the Sun on this Utopia.



The Four Elements, after a woodcut in Isidore's *De Responsione Mundi* (1472).

Ixir

The ixir or el-ixir, Tincture or alchemical Stone.

lynx

The Whirlers or the 'setters-up' in the Gnostic three-stage process of Creation. The lynxes were the first whirlings out of Chaos; the Synoches were the 'holdings-together' in Gravity; and the Teletarchae were the 'perfectings' or the Created Form. See also Gnostics.



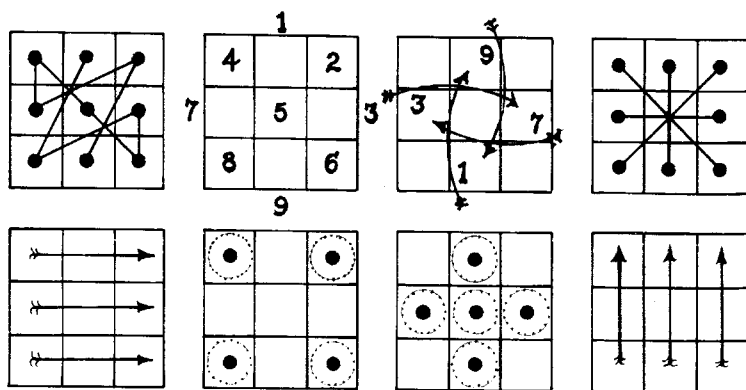
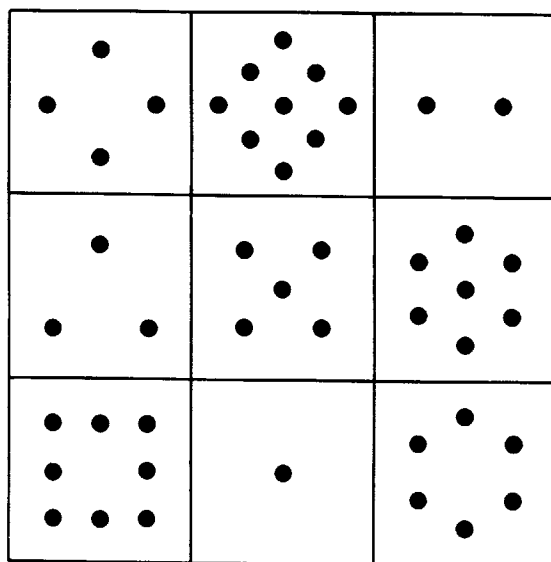
Jabir ibn Hayyan (c. 721–815)

Often confused with Geber, the composite creation of the medieval mind. The more-or-less real Jabir was known variously as al-Sufi (the Mystic), al-Kufi (the man from Kufa, a 'new town' on the banks of the Euphrates, where he certainly spent some time) and al-Tusi (the man from Tus in Khorasan).

Whatever Jabir's intriguing and intrigued-

against background of Shi-ite loyalists and powermonger viziers around the caliph, Jabir did become alchemist, in the newly founded Baghdad, at the court of the Abbasid Harun ar-Rashid, for whom he wrote *The Book of Venus* on the Noble Art of Alchemy. He was responsible for importing many scientific Greek manuscripts from Byzantium, and his own output was prodigious. Among his papers, listed by his bibliographer Ibn al-Nadim, are topics as diverse as astronomical tables, commentaries on Euclid and Ptolemy's *Almagest*, on military engines, magic squares, and logic. One of his books, *Kitab al-bahth* (of which many passages were incorporated into the *Picatrix*), explores talismans and astral empowerment, linking (in alchemical minds) with Iamblichus's *Egyptian Mysteries* and the *Esclepius*. His *Books of Balances* struggle to juggle with numbers and letters to find a formula for balancing all the components of every metal other than gold (the only one already perfect), so that these metals can be transmuted to their perfect state.

Jabir's alchemical square. From figures that add up to 15 in any direction, Jabir gets the magical numbers 17 and 28. (17 apparently governs all things – metals, for instance, have 17 'powers'; 28 is the number of letters in the Arabic alphabet, each being assigned to subdivisions of heat, cold, dry and moist.)



15	15	15	
4	9	2	15
3	5	7	15
8	1	6	15
17		28	

Jennis, Lucas



To extract Jabir from all the *Geber Corpus* would be a Magnum Opus of alchemical insanity, so intertwined are the sources, many of them tenth-century Shi-ite, many later, some of them remarkable in their analysis of metals, metal alloys and amalgams.

Two centuries after Jabir died, his laboratory at Kufa was demolished, and nothing was found except a great golden mortar. See also Baghdad; Caliph; Geber; Picatrix.

Jabulon

The freemasons' sacred name for the Hidden God: Ja = Jahveh, God of Israel; Bul = Canaanite Ba'al; On = Hebrew name for the Egyptian city IWNW, Heliopolis, the perfect city referred to in Hermetic texts.

James VI of Scotland and I of England (1566-1625)

The jittery king, cruel yet credulous, who was Rudolph II's psychological twin when it came to indulgence in the Black Arts. His *Daemonologie* was written before he succeeded Elizabeth I to the English throne. It was published in Edinburgh (1597) and twice in London (1603). James was so fascinated yet so terrified by witches that he had to write a disclaimer in order to persecute others and retain favour with the Church. He professed to be scandalized by the 'damnable error' of people like John Wier, or Reginald Scott (1538-99) who in his book *Discovery of Witchcraft* (1584) denied the reality of witches.

Cornelius Agrippa, John Dee and most of Rudolph II's court on the Continent had been delving into the dark side of the Unexplained. So had James, with equal eagerness. In 1580 Jean Bodin had written a nasty piece of work, *Demonomanie*, attacking sorcerers like Pico and Agrippa, to which James refers his readers.

James deals at length with the 'Divel's School' of those who wish to scale the steps of wisdom by 'mounting from degree to degree on the slippery scale of curiosity'. Yet James kept

three witches in his army, as did the king of Sweden, according to Holinshed, whose *Chronicles* of English Scottish and Irish history had appeared in 1577. Enlisting witches is not unknown in the modern world, since both Hitler and Churchill consulted them in World War II. And using Holinshed, who but Shakespeare could have exposed James's ambiguity about demonology in so masterly a way as unfolds in *Macbeth* (1606)? Here we have it all: the nature of prediction versus the power of suggestiveness, and how men deal with embodied witches, all in a play that flatters James as king.



Witch riding on a goat. After an illustration in *De Lamiis* (1489).

Jehovah

God. The Hebrew characters, יהוה Yod, he, vav, he (JHWH), being considered as sacred as the Egyptian hieroglyphs, meant that the Latin translators of the early Bible, the Septuagint, were not allowed to utter the name JHWH, Jahveh, any more than the Jews themselves. They used the Hebrew characters for 'my Lord', which when transliterated into Latin became 'Adonai'. These letters were then imposed upon the consonants JHWH, giving the fanciful form JEHOVAH.

Jennis, Lucas (seventeenth century)

A Rosicrucian publisher in the Palatinate, who



Jochanan, Allemanno, of Constantinople

had family and professional ties with the De Bry clan. He printed a prolific number of alchemical emblem-books, beautifully engraved, including those of Michael Maier and Daniel Stolcius. His *pièce de résistance* was his encyclopedia, *Musaeum Hermeticum* (The Hermetic Museum), which was originally published in 1625 in Frankfurt as a brief collection of nine up-to-date alchemical tracts. After Jennis's death it was re-edited and enlarged to 21 tracts in 1678. Both editions have the same title page, embellished around the edge by Matthew Merian with oval medallions of the Four Elements and variations on the Chymic Choir (top) and Atalanta Fugiens (bottom).

In typical alchemical fashion, Jennis's motto was an anagram of his name, Lucas Iennisius: 'in sinu lucis eas' (may you walk in the lap of light).

Jochanan, Allemanno, of Constantinople (fifteenth century)

Pico della Mirandola's teacher of Kabbalah who migrated to Italy, wrote a Kabbalistic midrash on the Torah, a treatise on Immortality and helped Pico collect a large library of valuable Jewish works. The versatile Jochanan was not only an expert on Kabbalah but learned in Greek and Arabian philosophy, too.

Jonson, Ben (c. 1573–1637)

A bricklayer's stepson, manslayer-turned-Catholic (temporarily) and playwright.

His comic satire, *The Alchemist* (1610), is a biting exposé of a quack and his whore who have duped a queue of gold-diggers, delighting in such names as Abel Drugger (a tobacconist) and Ananias and Tribulation Wholesome (two Puritan Brethren).

Jundeshapur

A city in southwest Persia, where Syriac Nestorian alchemists set up in the sixth

century after moving from Nisiblis. They had settled in Nisiblis after moving from Edessa, which had served as a stopping off point during the flight from Constantinople after being condemned as heretics at the Council of Ephesus in AD431.

Jundeshapur was one of the philosophical crossroads under the great King Chosroes Nushirwan (531–579) where persecuted people of all races and creeds could meet and exchange ideas: Greeks who had been forced out of Athens when Justinian closed down the philosophical academies in 529 joined the Nestorian, Persian and Indian sages.

Chosroes sent his own physician to India to research medical books, which were then translated from Sanskrit into Pahlavi (Middle Persian), and many alchemical Byzantine and Gnostic works were translated into Syrian and Persian.

All this prepared the ground for the arrival of Islam in the next century. The academy at Jundeshapur produced the first scientifically trained doctor, Al-Harith ibn Kalada (contemporary with the Prophet Mohammed, and mentioned in the Koran), and the Persian



Ben Jonson.

Jew, Masarjawaih, who translated Ahron's *Pandects* into Arabic and wrote the first Islamic science textbook.

Jung, Carl Gustav (1875–1961)

Jung was criticized by Canseliet and Claude d'Ygé, who were alarmed at his comparison, in *Psychology and Alchemy*, of the art of alchemy with pathological visions and dreams. Alchemy, they said, is not just a 'projection of unconscious fantasies'.

Jupiter

The planet ruling tin in the mineral kingdom; agrimony, endive and oak tree, in the vegetal kingdom, and the lungs in the animal kingdom.

The old alchemical theories about the ability of planets to transmute into metals might prove a reality. It was announced on British radio on 9 April 1996 that hydrogen could become a metal, and that the liquid state of the planet Jupiter could become a liquid hydrogen metal.

Jupiter



16	3	2	13
5	10	11	8
9	6	7	12
4	15	14	1

After a detail in Dürer's engraving of *Melancholy*: the magic square of Jupiter, whose numbers come to 34 whether added vertically, horizontally or diagonally. Magic squares demonstrated cosmic laws, related to natural growth, and were used as talismans to attract qualities of the planets they were associated with. In this case, Jupiter's cheerful optimism was held to temper Saturn's melancholy.



Kabbala Denudata (Kabbalah Revealed)

A massive Kabbalistic work of translations into Latin in three volumes, undertaken between 1677 and 1684 by Baron Knorr von Rosenroth. The original Hebrew and Aramaic derive from the *Zohar* and symbolic work of Isaac Luria, the sixteenth-century Palestinian Kabbalist, and the *Book of Purifying Fire*.

Although the lexicon that fills most of the first volume is 'little more than a chaos', and the whole work, according to Waite, attempts to cover too wide a field, nonetheless the *Denudata*, for all its bundling together of material, remained of 'prime value' as a way in

Design for a title-page for *Kabbala Denudata*, incorporating one of the old glyphs for gold in the sun.



to the 'sealed book' of the *Zohar*, right up until the twentieth century, when modern translations started to appear.

The *Kabbala Denudata* was a source for the teachings of the nineteenth-century occult Brotherhood of the Golden Dawn.

Kabbalah

Spelt this way, it comes from the Hebrew 'qabalah', tradition, secret doctrine of Israel, supposedly received by Abraham from the Chaldeans. One of the four esoteric paths closely associated with alchemy. See also Cabala; Qabalah.

Jewish minnesinger before a bishop, c. 1300, reciting Israel's history of exile.



Kalonymides

The famous Jewish dynasty in Italy which received the teachings of Babylonian Kabbalah from Aaron ben Samuel ha-Nasi, a ninth-century Babylonian Jew who emigrated to Italy. The Kalonymides in turn took the teachings with them to Germany c. AD917. For three centuries they weren't published until Judah the Pious (d. 1217), a member of the same



family, commissioned his pupil, Eleazar of Worms, to spread the oral and written Kabbalah into wider circles.

Thus Italian and German Kabbalah is a direct continuation of ancient Geonic mysticism, untouched by outside influences.

Kekulé von Stradonitz, Friedrich August (1829–96)

A would-be architect turned chemist, who, in 1865, formulated one of the crowning achievements of chemistry of the nineteenth century: the theory of the benzene ring. He was prompted in this by his vision (while dozing on a bus, he said) of the Gnostic symbol of the Uroboros holding its own tail in its mouth.

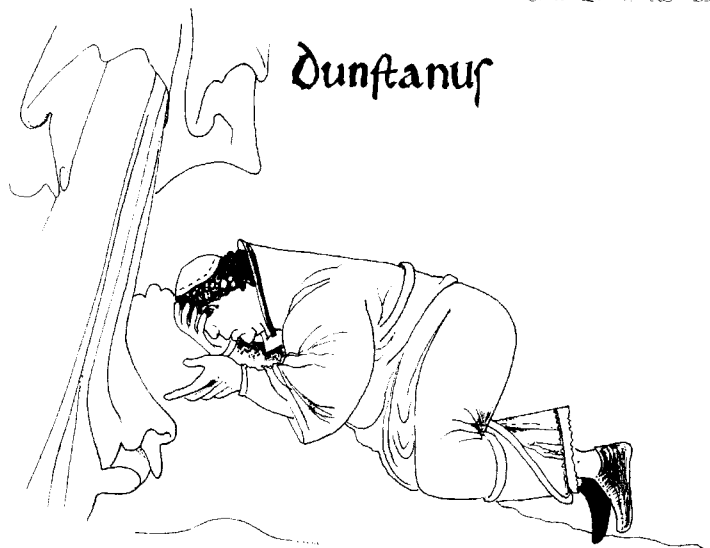
Faraday had discovered benzene in 1825, but it was Kekulé who understood its atomic structure: C₆H₆. Mindful of the great alchemical bibliographer-chemist, Berthelot, Kekulé was the first to define organic chemistry as the chemistry of carbon compounds. See also Uroboros.

Kelley, Edward (1555–1597/8)

A man much misunderstood and much labelled; certainly real, if by another name; certainly the menstruum by which John Dee sprang to alchemical life.

Kelley, according to Anthony à Wood, was born at 4 pm on 1 August 1555 in Worcester. Thereafter little is historically verifiable. Stories conflict:

- he studied at Oxford (there are three entries under the name Edward Talbot at Gloucester College);
- he was a notary or apothecary at Worcester or London;
- he was a neighbour of Dee's in London, and together in the 1570s they dug around for alchemical 'kemi' at Glastonbury;
- he acquired a mysterious ancient book on alchemy, the *Book of Dunstan*, which taught him the Art;



- he transmuted metals in a goldsmith's laboratory;
- he was a skilful writer, good at archaic forms of English, and at forging old documents;
- he lost his ears somehow — whether in England or Prague is unclear — and was crippled at some stage *before* 1586;
- he was known as 'il Zoppo' in Bohemia.

The fateful meeting with John Dee happened on 10 March 1582, when Kelley turned up as Edward Talbot at Dee's house in Mortlake. He tried to entrap Dee into a confession of dealing with evil angels. Having failed in this, Kelley arrived again in April, bringing 'a cipher' for Dee to translate.

This was the beginning of the strange partnership of magus and crystal-gazer, first in England, then in Poland and Bohemia. Even after they had parted for ever, Dee couldn't 'let go' of him: Dee the earnest intellectual, addicted to scryers, Kelley the irascible, talented opportunist who 'interpreted' the angelic forces, 'heard' the voices, 'saw' the visions in Dee's crystal ball, and 'wrote' the Enochian language, the *Liber Logaeth* that appeared to him in séances.

The two did alchemical experiments with

St Dunstan at the feet of Christ. Dunstan, powerful founder of Glastonbury Abbey, was supposed to be an alchemist and the patron of goldsmiths. One of the legends about Kelley is that he got all his alchemical knowledge from *The Book of Dunstan* at Glastonbury.



Kerotakis

the red powder that Kelley had somehow acquired. How far all these phenomena were genuine, how far Kelley telepathized, how far he had second sight, how far it was gobbledeygook is impossible to say.

Bound like the Hermetic androgyne, Dee 'n' Kelley went to Poland with their families at Count Laski's invitation, thence to Bohemia, where they popped in and out of Rudolph II's court. Their reputation fluctuated like their experiments. Rudolph's Treasury got no fuller. Dee and Kelley incurred *his* displeasure because they couldn't produce gold adequately, and the Pope's because they conjured up spirits. They left Rudolph's Court to take refuge at Count Rozmberk's castle at nearby Trebon. According to Dee's *Diary* on 19 December 1586, 'EK made projection with his powder'. The following year Dee notes how Kelley performed the Great Work thrice: on 10 May, 24 August, and 14 December. Meanwhile, in October 1586, Rudolph had written to the Count requesting Kelley's presence to supervise an alchemical Operation that was in progress. Dee handed over to Kelley all his 'powder' and 'books'. Kelley knew there was no benefit to him in staying with Dee, but something could be gained from Count Rozmberk and from Rudolph.

For a while, Kelly fared better once Dee had left. He became the darling of Rudolph's court and was knighted. He stayed in favour during 1589-90, doing his Magnum Opuses or Magna Opera. Suddenly in May 1591, he was ordered into prison. His tricks had caught up with him. He was in and out of prison until his death, which was *not* on 25 November 1595 when Dee records in his *Diary* 'the newes that Sir Edward Kelley was slayne'. He was certainly alive, if struggling, in 1597 at Most Castle near Prague. He was not ignored. The alchemist Oswald Croll visited him in prison there, and he was remembered in Michael Maier's *Symbola Aureae Mensae*. It is not known whether, in 1596, he really did send out from prison his manuscript to Rudolph on *The Stone of the Philosophers*, but that work and his *Humid*

Path are written with remarkable clarity.

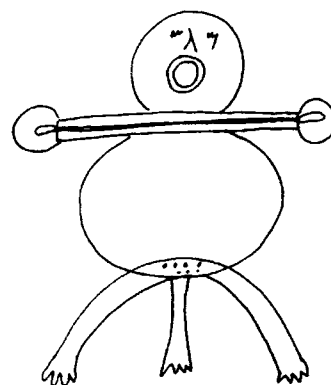
The final comment on Kelley is from Elias Ashmole's note on the metrical tract *Sir Edward Kelley's Work*, printed at the end of the *Theatrum Chemicum Britannicum*:

'Tis generally reported that Doctor Dee and Sir Edward Kelley were so strangely fortunate as to find a very large quantity of the Elixir in some part of the ruins of Glastonbury Abbey which was so incredibly rich in virtue (being one upon 272,330) that they lost much in making projection by way of trial before they found out the true height of the medicine ... Whether they found it at Glastonbury ... or however they came by it, 'tis certain they had it.'

Kerotakis

An alchemical brazier, reputedly invented by Mary the Jewess of 'bain-marie' fame.

Originally a palette for artists to keep their paints fluid and kept over a charcoal-burner, this three-legged doll is one.



Kerotakis or Alexandrian brazier

Kether

The 'crown' in sephirotic systems of Kabbalah. In Hebrew, Kether is masculine, so 'Praised be the Crown' is 'Praised be He'.

Key of Solomon

A grimoire that was supposedly the 'Open Sesame' to the ancient wisdom of Solomon,



ranking next to the *Emerald Tablet* as the most celebrated of magical texts, of the sort consulted by Trithemius, Cornelius Agrippa and Dee. It assumed many forms. A printed version would have had no 'virtu'. The text had to be copied out by hand by each person who wished to use it, so that the mind of the magician would impregnate the calligraphy, transforming and 'personalizing' it.

For some Kabbalists, the Art of manipulating the Shemahamphorash, the 72 names of Jahveh, in order to find the keys of universal science, was known as the Keys of Solomon.

At the University of Krakow, John Dee in 1584 would have found several versions of the *Clavicula Salomonis* (Little Key of Solomon), the grimoire that the Polish Bishop Jan Dziadulski (1496–1559) had actually encouraged his congregation to study. But the Church decided that the information should be the reserve of the priesthood alone. The *Clavicula* should not have 'leaked out' into general circulation. It was intended for ritualistic use.

Khalid (AD660–704)

One of the legendary founders of Arabian alchemy and a grandson of the first Umayyad Caliph, Mu'awiya (reigned 661–680). According to Ibn al-Nadim, the tenth-century biographer, Prince Khalid, son of Caliph Yazid I, as a youth in Damascus got caught up in a court rumpus over succession, so retired to devote his life to the sciences, alchemy in particular. Al-Nadim says that Khalid asked for Greek philosophers to be brought from Egypt to translate alchemical tracts from Greek and Coptic (late Egyptian or Syriac) into Arabic. 'This,' says al-Nadim, 'was the first translation from one language to another in Islam.'

Khalid supposedly became a disciple of Morienus, the Alexandrian alchemist who had studied under Stephanos, although the tale of Khalid beheading the alchemical quacks who had previously been putting on shows of gold-



making, before he had tracked down Morienus in his hermitage at Jerusalem, is no doubt apocryphal.

There exist a number of books under Khalid's name: *The Book of Amulets*, *The Book of The Testament on the Art* and *The Great and Small Books of the Scroll*. The most famous book ascribed to Khalid by a seventeenth-century Muslim biographer, Hajji Khalfa, is *The Paradise of Wisdom*. But most of Khalid's wisdom is embedded in a mass of pseud-epigraphia.

Khunrath, Heinrich (1560–1601/5)

Born in Leipzig, Khunrath studied in Basel and became a 'Doctor of this and that medicine', as he called himself. He was a practising alchemist and cabalist, connected with the Rosicrucian Brotherhood, as revealed in his mystical emblems. Even for an alchemist, he was of 'a strange exotic kind'. Waite talks about Khunrath's 'fuliginous terminology', which is rather apt, metaphorically, while literally Khunrath's presentation is a bit sooty, with ink blots in the cramped handwritten Latin, Greek, Hebrew and German jumble that squeezes into the rocks and pillars of his pictures. Khunrath anticipated not only the theosophist Boehme (who incidentally appropriated almost verbatim many of

Krakow in the fifteenth century. Krakow was home to Count Laski and to occult studies. Its university housed many Hermetic texts.



Kroll, J.

Khunrath's spiritual aphorisms – 'the world must be made heaven, and heaven the world' – and suchlike) but the Jesuit Egyptologist Athanasius Kircher and even William Blake.

He resided in Hamburg, practising iatrochemistry and alchemy. From there, in 1589 (on 27 June according to Ashmole), he went to Bremen to meet John Dee, who was on his way back from Count Rozmberk in Bohemia; Khunrath probably got an introduction from Dee to his patron Rozmberk, who was a sick man. Khunrath did go to Bohemia, and as a physician-chemist, hovered on the edge of Rudolph II's entourage. In 1598 Rudolph issued him a 'privilegium' (copyright) to protect his works whether written, engraved, medicinal, alchemical or cabalistic. Finally, Khunrath settled in Dresden, where he died in poverty some time between 1601 and 1605.

Khunrath's philosophy is summed up in the frontispiece of the first edition (1602) of his strange emblematic work *Amphitheatre of Eternal Wisdom*:

PERSEVERANDO
ORANDO, LABORANDO
NEC TUMIDE, NEC TIMIDE

(Persevere, pray, work, without pride and without false modesty.)

For Khunrath, the cosmos is a work of supernal alchemy, performed in the crucible of God. Man can attain the wisdom of the cosmos through the twofold path of the Laboratory (alchemical praxis) and the Oratory (contemplative prayer). Khunrath sees man as the subject of the Art (of alchemy); his soul is 'intincted' and becomes the Stone, transmuted and transmuting.

Having written three small alchemical tracts on Symbols, on the *Catholic Magnesias of the Philosophers* and on *Azoth*, Khunrath prepared for his Magnum Opus, his *Amphitheatrum Sapientiae Aeternae Christiano-Kabalisticum*. He drew sketches for four plates: *The Cosmic Christ*, *Adam and Eve Conjoined*, the *Philosopher's Stone* and the *Laboratory*. These

represent the four stages of initiation and the four esoteric paths:

Firstly, the Path of Kabbalah.
Secondly, the Path of Magic.
Thirdly, the Path of Alchemy.
Fourthly, the Path of Theurgy: The Laboratory. All work is sacred. Through doing the Magnum Opus, all the other paths (Kabbalah, Magic, Alchemy) come together. God's elect do not cease to be human. Work strengthens the body, prayer the spirit.

In later editions of the *Amphitheatre*, these four emblematic plates were increased by eight more, intended by editors to clarify and link in with the originals. The visionary landscapes with their Latin, Greek, Hebrew and German inscriptions, their hieroglyphic obelisks, rocks and vistas, are reflections of other Utopias, the *Christianopolis* of Andreae or the *Citta del Sole* of Campanella.

Kroll, J.

(late nineteenth to early twentieth century)

A German historian, who revolutionized modern thinking about the placing and dating of Hermetic texts. Previous theories rested on Isaac Casaubon's editing, that they paralleled St Paul in time, and borrowed from Plato. Kroll recognized the texts as being pre-Christian: as far back as the third century BC possibly. Moreover, he studied the Chaldean Oracles and established that they stemmed from a single poem in the style of Greek Sybilline verses.

Kulliyat (On the General Rules of Medicine)

A brilliant work by the great Arabian philosopher-chemist, Averroes. The Latin translation by the Jew Bonacosa, the *Colliget* (Padua, 1265), was the first major contribution to the Arabic-Latin alchemical translations of northern Italy. The treatise was still being studied, after the invention of printing, up to 1560.



Laboratory

The alchemist's place of work and of prayer, his oratory. Traditionally, the apparatus of the adept are few: a furnace or athanor (Arabic 'al-tannur'), which allowed coke to burn very slowly; a philosopher's egg or retort; a glass vessel with a long down-bent neck for heating mercury and for purification; a crucible, which was an earthenware melting-pot for metals; a pelican or still with a dome at the top of its belly from which led tubes or 'beals', through which the distilled liquid dripped back into the bottom of the still.

The Canon's Yeoman in Chaucer's *The Canterbury Tales* describes the laboratory with its crucibles, flasks and retorts whose contents were subjected to processes of heating, mixing and cooling, a dozen times or more. The technical names were often indiscriminately used, and each alchemist had his own method of calcination, solution, separation, conjunction, putrification, congelation, cibation, sublimation, fermentation, exaltation, multiplication and projection.

The projection of the liquid upon base metal was expected (or hoped) to transmute it into gold.

Lambspring

The emblematic *Book of Lambspring* appears in Lucas Jennis's *Musaeum Hermeticum* (Frankfurt, 1625). It may well derive from the text known as *De Lapide Philosophico* in the Triga Chemica Collection of Nicolas Barnaud (Prague, 1599), and indeed it circulated during the 1580s round the Rhineland and the Netherlands in manuscript form.

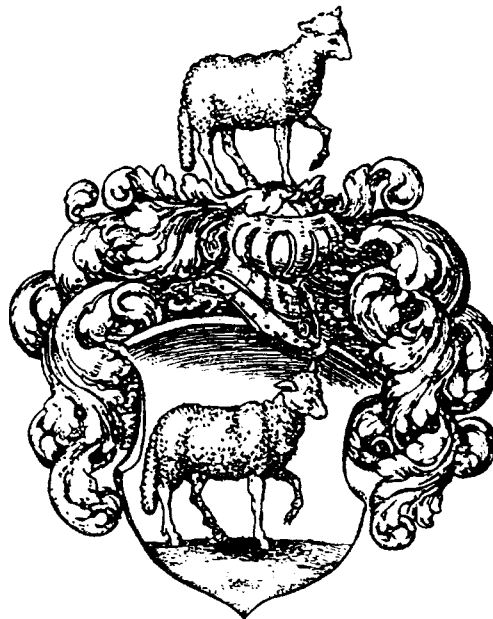
It is a delightful handbook for the contemplative alchemist: a spiritual journey through 15 double-spreads of picture and



verse. Half or more resemble the emblems in *Atalanta Fugiens*.

The Book leads the reader through the archetypal alchemical symbolism of dragons, lions, deer, fish and unicorns (variations on body, soul and spirit) to the rebirthing of the Son through the Father, with the ancient psychopomp, the winged Mercury, mediating as the magician Merlin or Mercurinus. See also Psychopomp.

The alchemist's laboratory, after a fifteenth-century cartoon.



The Coat of Arms of Lambspring

The Coat of Arms of Lambspring



Lapidary

Lapidary

Both object and agent – i.e. a book classifying stones; and a gemmologist, goldsmith or stone-cutter. There were dozens of books on the subject in the Middle Ages. The favourite lapidaries were Arabian and concentrated on the efficacy of stones as talismans. *The Book of Stones*, long attributed to Aristotle, with translations in Hebrew and Latin, examined the magical power of stones; *The Flowers of Knowledge of Stones* (1154) appeared from the pen of the alchemist Shihab al-Din al-Tifashi of Cairo; while the best known of all gem-books was the colourful *Lapidario* of the versatile thirteenth-century monarch, Alfonso X of Castille.

Collections of books on stones were commonplace in Alexandria among glass-cutters and stone-engravers. Chrysopoeia was the alchemical practice of gold-making, and developed to a royal Art by such as Zosimos and Ostanos. Books on the Philosophical Stone abound, 'The stone which is not a stone'. Many an alchemist wrote his *De Lapide* – Kelley, Sendivogius and Barnaud, to name three.

The most famous human lapidary was Anselm Boethius de Boodt, a doctor to Rudolph II of Prague and his Chief Lapidary. His *Gemmarum et Lapidum Historia* (1609) was probably the most important history of gems and stones of that century. It was a complete reclassification of stones, their origins and properties – both benevolent and malevolent – their energies and 'virtues'. Like his contemporary lapidary, Agostino Riccio from Venice, Boethius was an alchemist and natural scientist. The rich veins of metal ore, mines and stone quarries of Bohemia and the Giant Mountains attracted many such Croesuses and budding geologists.

Lascaris

Another case of the disappearing alchemist! One of three alchemists who appeared then disappeared between 1687 and 1784. Signor

Geraldi was the first (1687–90); Lascaris was the second (1693–1740 or so); and Count Saint-Germain the third (1743–84). All of them appeared between 45 and 50 years old but never grew older. All of them had the 'red powder' and could perform the Magnum Opus many times. All refused food and sex. All were Mediterranean in appearance and voice; all were garrulous. It seems likely that all were Rosicrucians whose mission was to 'multiply' alchemically around the world, proving the truth of the Art.

In spite of high ideals, Lascaris left a trail of legal cases in his wake. He played upon the incredulity and greed of people. 'Lascaris' meant 'sailor' and was used, in contempt, of Levantine stowaways. Many are the improbable stories of unsuspecting men, including the young Böttger, that Lascaris waylaid, held 'with his glittering eye' like the Ancient Mariner, and subverted into performing the transmutation with the red powder that he gave them.

Eventually, Lascaris in spite of anonymity was alerted that the Elector Palatine wished to arrest him. He begged sanctuary at the house of Countess Anna Sophia von Erbach. When the danger was over, he transmuted much of her household silver into gold, which was verified by the local goldsmith's certificates. Inevitably, word of this remarkable transmutation got around, particularly to the Countess' estranged husband, who decided after all that he was still married to her, and demanded half the alchemical gold. The whole case came to court at Leipzig in 1733. The court ruled that the Countess should keep the gold, because as silver it had belonged to her. Wisely, Lascaris disappeared after this. See also Böttger.

Lead

A powerful cumulative poison known in Babylon to contain antimony. Lead is not just a metal, but one of the alchemical symbols for dark, lustreless prime matter. Governed by

Saturn, it combines with ordinary silver in the process of cupellation to purify the silver into Philosophic Mercury in the early stages of the Magnum Opus. See Cupellation; Valentine.

Lemegetton

A fifteenth-century version of the *Clavicula Salomonis* (Little Key of Solomon), the Kabbalistic grimoire that alchemists such as Dee had studied.

Leyden papyrus

An Egyptian Late Kingdom magical papyrus, c. 300bc, containing alchemical writings, now in the Leyden Museum, Holland. The format, an extended incantation to negate the power of the Sethian serpent Apopis, merges together the various creation myths and matches aspects of creation with magical numbers, Pythagorean fashion.

Lion

The lion symbolizes gold or the sun. The Green Lion swallowing the sun is an alchemical symbol for gold being dissolved in a mixture of nitric and hydrochloric acids called 'aqua regia' (royal water).

Newton in his alchemical reveries mused long over the story of Daniel in the Lion's Den. The mythology of the Egyptians always had a lion as the guardian of sacred places. This could date back to the priests of Heliopolis who incorporated into their solar creed the lion as the guardian of the gates of the underworld. The Lion Sphinx was sentinel, while its human features are thought to have been those of the early sun deity, Atum.

Lull, Ramon

A mysterious Balearic islander of Catalan origin who comes and goes through alchemical commentaries like a will-o'-the-wisp. He may have been a real alchemist living from 1234 to

1316; more likely he is a composite invention, symbolizing a mystical philosophy in which all truths can be demonstrated by inspired jugglery ('ars combinandi'). Lullian theories were a mixture of magic, divine power of names and conjuring angels, and medieval cabala. The praxis was a kind of alchemy: magical Operations, summoning angels, working with symbolic numbers and letters and contemplating the World Soul that infused the three worlds of the Trinity.

Voluminous works have turned up under his name such as the *Tractatus de Astronomia* and *The Works of Lull* at the end of the Berne, 1545 edition of the *Summa Perfectionis*, and the collection of texts dated 1628 under the title *Novum Lumen Chymicum*, written in Latin 'in a fair hand'. Lull is cited in the *Philosophorum Praeclara Monita* (The Most Renowned Maxims of Philosophers) along with Ripley and Villanova. He figures as one of Maier's 12 heroes in the *Symbola Aureae Mensae* (1617) and his *Testamentum* appears in Zetzner's *Theatrum Chemicum* Tome IV 1659, along with Bruno's commentary, and in Manget's 1702 *Bibliotheca Chemica Curiosa* Tome I. The first part of his *Testament* is the *Theoria* and the second part is the *Practica*.

Lull states that he obtained the congelation of common mercury by means of its menstrual, and that he performed the experiment near Naples 'in the presence of a natural philosopher and faithful associates'. In *Experimenta, s.v. Aliud Experimentum XXXIV*, Lull recurs to the congelation of Mercury and says his 'operation' was performed in front of 'King Partinopeus'. This gentleman appears to be pure myth!

Lull, Ramon



Lion swallowing the sun: 'the true green and golden lion' symbolizing the transformation of *prima materia*.





Magic

Practised by alchemists since the beginning of their recorded history, magic opens doors through ritual, spells or psychological manipulation. It derives from the Greek 'Magos' a magician, and 'Magela' magic (variations of 'Mog', 'Megh', 'Magh' in Pahlavi and Zend = priest, wise, and excellent; cognate with 'Maghdim', supreme wisdom, in Chaldean).

Among the ancient Persians and Egyptians, the Magi were those who had a higher knowledge of nature. As Croll says in his *Basilica*: 'Magia is the means by which nature intended man to explore.' Alchemists had a thirst for magical books, manuals from the ancient world, a thirst to decode obelisks, papyri and glyphs, and to empower talismans

to reach higher states of transformation than the confines of official religion would allow.

Handbooks and instruments remain: the *Picatrix*, the grimoires of popes, keys, Cornelius Agrippa's *Occulta Philosophia*, sigils, gemstones, engraved wands and speaking swords, but how they were used remains within the secret tradition of the initiates.

Cabalistically, the term 'mage' overlaps in meaning with 'image', something the 'imagination' can invent and empower. So by a curious transference, in the Renaissance, Leonardo da Vinci refers to a 'macchia', a spot to stimulate the artistic 'imagination', while the Mannerist painter Arcimboldo looks on his sketches as 'macchie' ('maggia', 'maggie'), magical shapes transforming chaos.

Words suffer degradation over the centuries. A 'magician' is no longer revered as a magus; magic no longer implies the Eleusinian mysteries or a path of wisdom for the initiated. The act of writing and drawing is no longer sacred.



Magnum Opus

The Great Work, to which all alchemists aspire, the alchemical Operation. The paradox is that it was not just one Operation but two: the first being the making of the Stone and the second being the using or projecting of it. See also Philosophic Mercury, Salt and Sulphur.

Maier, Michael (1568–1622)

The German Hermes, a musical, Rosicrucian alchemist whose phenomenal output in the space of six years was published largely by the De Brys and by Lucas Jennis.

The Magnum Opus incorporating: the square, triangle and circle; the heavenly bodies and metals; the sign of Saturn (lead) pointing down to the cubic Stone, which is in turn circulated by five stars (planets), the King and Queen with their respective attributes – gold, sun, lion, fire, earth versus silver, moon, dolphin, air and water – sit on opposite sides of the Stone, awaiting purification before conjunction.



Maier was born in Rindsberg, Holstein. After he had graduated as a Doctor of Medicine, he lived at Rostock. He somehow became personal physician in Prague to Rudolph II, who upped his position to 'Count' Michael Maier, thence up again to Doctor of Philosophy and Alchemy and Private Secretary. On the death of Rudolph in 1612, Maier hastened to Holland and Germany, then England, where he made links with Robert Fludd and King James I's physician, Sir William Paddy. Since his personal life had not been beyond reproach, and Rudolph's court had now disintegrated, Maier probably wondered who to attach himself to next. It was Moritz, Landgrave of Hesse-Kassel, fortunately, who gave him money to spy and patronage to write.

The Lutheran Maier experienced the Eucharist as alchemical transformation, and reflecting this, his contorted works streamed off his pen in lumbering, cryptic Germano-Latin, with impossible titles (here summarized). In 1614 appeared his *Arcana Arcanissima* (Secret of Secrets), interpreting Greek myths alchemically; in 1616 his *De Circulo Physico Quadrato* (On Squaring the Physicist's Circle); in 1617 his *Lusus Serius*, which summed up the whole ethos of alchemy as a Serious Joke, and was dedicated to a dubious English alchemist, Dr Francis Anthony; in the same year his *Symbola Aureae Mensae*, which were accounts of 12 exemplary alchemists or 'sophic apostles'; his *Jocus Severus* (An Earnest Jest), a bird-debate in which ultimately the Owl is crowned Queen; his *Examen Fucorum* (A Gagggle of Quacks Exposed).

All this built up to the year 1618, in which were published Maier's *Silentium Post Clamores* (Silence After the Outbursts) and his *Themis Aurea* (The Golden Themis, Goddess of Justice – i.e. the Golden Rule). Then, as if after long incubation, the philosophic egg burst forth the emblematic *Atalanta Fugiens* with wondrous engravings by Matthew Merian. Thereafter, a quiet dying down, with a number of tracts, including the *Verum Inventum* (which

flattered his German homeland), the *Septimana Philosophica* (The Philosopher's Week) and *Ulysses* (symbol of absolute human wisdom), published posthumously in 1624. Finally Maier was editor of *The Golden Tripod*, published by Jennis in 1618 as a collection of three alchemical tracts: Basil Valentine's *Twelve Keys*, Norton's *Ordinall* and Cremer, Abbot of Westminster's *Testament*.

Maimonides, Rabbi Moses ben Maimon or 'Rambam' (1135–1204)

A Spanish-Jewish alchemist and philosopher, controversial and modern in his outlook of 'comparative' study as compared with 'absolute', Maimonides was one of the great philosophic pillars of the Middle Ages, whose authority stretched over many disciplines: science, alchemy, philosophy, religion, medicine and languages.

Born in Cordova and educated by a learned father under an Arab master, Maimonides when still young had to flee with his family from fanatics. He became the archetypal wandering Jew, ending up in Cairo in 1155 as a court physician and philosopher. There he taught that there is no conflict between revealed religion of the Torah and truths worked out by reason.

Maimonides's signature

His *Guide for the Perplexed*, written in Arabic in Cairo c. 1200 for intellectuals, covers a complete metaphysical system: all physics and philosophy, all codes of behaviour, can be decided either by reason or by revealed truth; that in fact the conclusions ('natija') of reason amount to exactly the same as the results or conclusions of revelation.

Maimonides' world-system was inspired by



Manget, Jean-Jacques

Aristotle, whose writings were available to the Arab world via Hunayn and Avicenna. Maimonides exerted a great influence on western philosophers, alchemists and even monks, especially the Dominicans.

Manget, Jean-Jacques

A seventeenth-century Swiss doctor and amateur alchemist, editor of the *Bibliotheca Chemica Curiosa* (The Careful Enquirer's Chemical Library), published in two large folio volumes (Geneva, 1702). This anthology contains the cream of traditional alchemical literature, fact and fiction being swallowed together: Geber, the Arabians, Hermes Trismegistus, Lull, Arnold Villanova, Bernard of Trevisa, Helvetius and the *Mutus Liber*.

Some of the delights of Manget are his chatty asides and anecdotes; for instance, the tale about Boyle and the shabby stranger who brought some red powder then disappeared – a familiar formula!.

Maslama ibn Ahmad al-Majriti

A tenth-century Arab from Madrid, mathematician, astronomer and reputed author of the *Ghayat al-hakim*, known in translation as the *Picatrix*. This became the indispensable grimoire of ritual magic and seances for such magi as Pico, Trithemius and Cornelius Agrippa, and such monarchs as Alfonso X of Castille and Rudolph II of Bohemia. The book endowed its users with powers in angel-summoning and power from the stars. If philosophy was the cause, then alchemy and astronomy were the effects (the 'conclusions') of using this book. It is interesting to speculate how far Pico was influenced by these hotch-potch magical conclusions ('natija') of Maslama in his own *Conclusions*. See also *Ghayat al-hakim*; *Natija*; *Picatrix*.

Maximilian I (1459–1519)

In his zeal for the supposed sciences, this

Hapsburg emperor is said to have searched, in 1515, the Benedictine archives at Rome and made many different enquiries in monasteries for particulars of the Benedictine alchemist Basil Valentine and his remains, but with no success. Nothing of Valentine's appeared in writing until – well after Maximilian's death – in 1604 *The Chariot of Antimony* was published by Johann Tholden Hessius (Thölde).

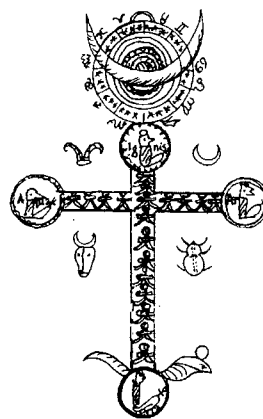
Maximilian, 'lion of the South German humanists', had several alchemical/astronomical books dedicated to him, including Johann Stoeffler's *Calendarium Romanum Magnum* and Trithemius's manuscript on magical writing, the *Steganographia*.

Menstruum

An alkahest for extraction purposes; a solvent, having the power of dissolving and re-forming. The word was used as the alchemical parallel between the transmutatory action of the solvent on metal being changed into gold and the supposed action of the menses on the ovum.

Mercury

☿ along with ☾ and ☾ are the only planetary symbols that can be traced to antiquity. 'Heaven and earth have been created out of nothingness, but they are composed of three things – mercurius, sulphur and sal', says Paracelsus. Alchemical Mercury is the 'essence', Salt is the 'body' or



The hieroglyphic monad, a pictorial world-system and variation on the ankh, the caduceus and the glyph of mercury.



SCHEMATA ECLYPSIVN LV		
MINARIVM CVM IVSTA TEMPORVM ANNOTATIONE		
1518 ECLYPSIS LVNE Die 24 Hora 11 Minuta 17 April. Dimidia duratio. Die 1 Hora 34 Puncta 11	1518 ECLYPSIS SOLIS Die 7 Hora 17 Minuta 51 Junij. Dimidia duratio. Die 1 Hora 6 Puncta 11 Fere	1519 ECLYPSIS SOLIS Die 23 Hora 4 Minuta 31 Octobris. Dimidia duratio. Die 0 Hora 59 Puncta 6
1519 ECLYPSIS LVNE Die 6 Hora 6 Minuta 22 Novembris. Dimidia duratio. Die 1 Hora 49 Puncta 17 Fere	1520 ECLYPSIS SOLIS Die 11 Hora 5 Minuta 20 Octobris. Dimidia duratio. Die 0 Hora 46 Puncta 1 Quasi	1522 ECLYPSIS LVNE Die 31 Hora 2 Minuta 15 Septembris. Dimidia duratio. Die 1 Hora 44 Puncta 11

SCHEMATA ECLYPSIVM LV		
MINARIVM CVM IVSTA TEMPORVM ANNOTATIONE		
1523 ECLYPSIS LVNE Die 1 Hora 8 Minuta 24 April. Dimidia duratio. Die 1 Hora 48 Puncta 11	1523 ECLYPSIS LVNE Die 25 Hora 15 Minuta 12 Augusti. Dimidia duratio. Die 1 Hora 47 Puncta 11	1525 ECLYPSIS LVNE Die 4 Hora 10 Minuta 8 Julij. Dimidia duratio. Die 0 Hora 53 Puncta 2
1525 ECLYPSIS LVNE Die 29 Hora 10 Minuta 4 Decembris. Dimidia duratio. Die 1 Hora 44 Puncta 12 Fere	1526 ECLYPSIS LVNE Die 18 Hora 10 Minuta 28 Decembris. Dimidia duratio. Die 1 Hora 48 Puncta 14	1529 ECLYPSIS LVNE Die 16 Hora 20 Minuta 21 Octobris. Dimidia duratio. Die 1 Hora 57 Puncta 11

Johann Stoeffler's
Calendarium, dedicated
to Maximilian I.

'ashes', and Sulphur the 'oil' clinging to Mercury.

The most important yet the most elusive, or volatile, of the metals, mercury has myriad names, ranging from 'mother of minerals and metals and their first matter' to 'terrene unctuousness'; and from 'gluten' to 'blood of the red lion'. Chemically, mercury is Hg (hydrargyrum, silver water); however, Philosophic Mercury is not to be confused with common quicksilver.

Metamorphoses, or The Golden Ass (second century AD)

Metamorphoses is one of the most fantastic poems of Silver Latin. Its author, Apuleius, lived in the post-decadent Roman Empire,

when magical practices and talismanic alchemy abounded. In the aftermath of any great Empire that has turned to mental, moral and physical sickness, there is a frenetic resurgence of magic. Pliny writes of Druids, soothsayers, healers, alchemists, sorcerers and augurers; and he enumerates the virtues of precious stones, minerals, saliva and the four humours.

The fantasy of *Metamorphoses* is alchemical in its concept of transformation. Witches possess the power of transforming their enemies into animals. They can bring the dead back to life, they can spell-bind, they use human blood, hair and fingernails in their working, and they know the power of words of invocation.

Apuleius's *Apologia* is his defence against the accusation of magic. He distinguishes between white magic – indicated by the simple



Midrash

use of the word 'magic' – and black magic which he condemns. He defends the study of natural history, alchemistically used for human good and religion. His orientation is mystical.

Midrash (plural Midrashim)

A running commentary on the Jewish Scriptures of the Old Testament, from the root D-R-SH = to seek, to seek out the meaning. There were two forms of midrash. First, the halakah (-oth), from the root H-L-KK= to walk, which were the regulations regarding civil and religious law, supposed to show the way a man should walk in the biblical laws. Second, there were the haggadah (-oth), from N-G-D = to recount or to tell, which were expositions of biblical stories or parables.

Molybochalcum

An alloy of copper and lead.

Moon

Representing Silver, the Lesser Work, or Mercury, the Moon conjoins with the Sun, Gold, in the Greater Work.

Moses de León (1250–1305)

The question whether Moses, who called himself Moses, son of Shem Tov from the City of Leon, was a devoted scribe or devious author can never be solved, but he is thought by most scholars now to be the originator and compiler of the *Zohar*, rather than merely a scribe copying ancient wisdom. He was involved in the Kabbalistic movement that had emerged in twelfth- and thirteenth-century Catalonia and Provence. His *Sefer ha-Rimmon* (Book of the Pomegranate) lashed out at wealthy assimilated Spanish Jews who neglected their tradition, while his *Or Zaru'a* (Sown Light) showed Moses' dismay at lack of spirituality or intellectual purpose.

Moses settled in Guadalajara in central

Spain c. 1275 and wrote midrashim on the Torah, Book of Lamentations and Song of Songs. By 1280 he had produced the main body of the *Zohar* and continued writing his own Kabbalistic commentaries in a mixture of Hebrew and Aramaic. By 1305, Moses was referring to his own *Zohar*.

Mutus Liber

A jewel of an emblem-book, first published by Pierre Savouret (La Rochelle, 1677), then published as an addition to the first volume of Manger's *Bibliotheca Chemica Curiosa* (1702), although Manger does not refer to it in his text. The *Mutus Liber* (Book Without Words) is a series of 15 engraved folio plates showing the stages of the alchemical Operation, which sum up the mystical relationships between the natural, chemical and spiritual worlds.

The twentieth-century alchemist Arnaud Barbault was so inspired by this book and the explicit nature of the dew-collecting plates that he did his own experiments exactly as the plates depicted and always said that he hid nothing: 'Those who have eyes to see, let them see.' The creator of the *Mutus Liber* is not known, although the first emblem, of Jacob asleep on a 'Stone' pillow below the ladder with Angels ascending and descending, points to either a Jacob Saulat or a Jacob Tollé, a doctor from La Rochelle (1630–96), goldsmith/ alchemist.

Mylius, Johann (early seventeenth century)

In the wake of Maier in Hesse, came Mylius, with his updated history of metal transmutation, *Philosophia Reformata*, published by Lucas Jennis, the Rosicrucian sympathizer (Frankfurt, 1622). Buried in the erudite text were 60 superb emblems (from Jennis's 'picture-bank'), symbolizing alchemical birth, death, marriage and sublimation. These were unearthed again by Jennis and copied a couple of years later for Daniel Stolcius's *Viridarium Chemicum*. See also Jennis; Maier; Stolcius.

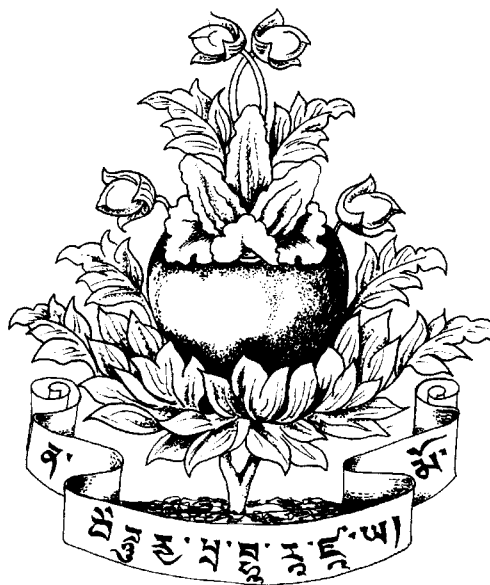
Myrobalan fruit



Myrobalan fruit

An alchemical symbol of healing in Tibetan medicine; the supreme salve that cures all illnesses.

Under the section 'Compound Purgers' in his *Anatomy of Melancholy*, Burton mentions five kinds of myrobalans or Indian plums, alongside 'pills one would not wish to be without', such as Cochia with Hellebore. See also Burton; Food.



Myrobalan, symbol of supreme healing. This fruit, which is found in India and Tibet, is mentioned by both Burton and Rabelais.



Nagayuna

The Indian path of alchemy. The 'naga' are the two entwined serpents of ancient India, the symbols of alchemical transformation from the lower levels to the higher. The 'naga' are direct precursors of the caduceus, the serpents of Mercury, symbolizing the healing link between the underworld of Earth Mother, of the lower

creatures, and the heavens, the higher world of gods towards which the snakes stretch. They are inscribed on stone tablets called 'nagahals' at the entrance to temples.

The chief pursuit of nagayuna is the transmutation of substances to preserve the vital elixir of life and so bring about a physical balance of immutable duration when all the energies of the body are unified.

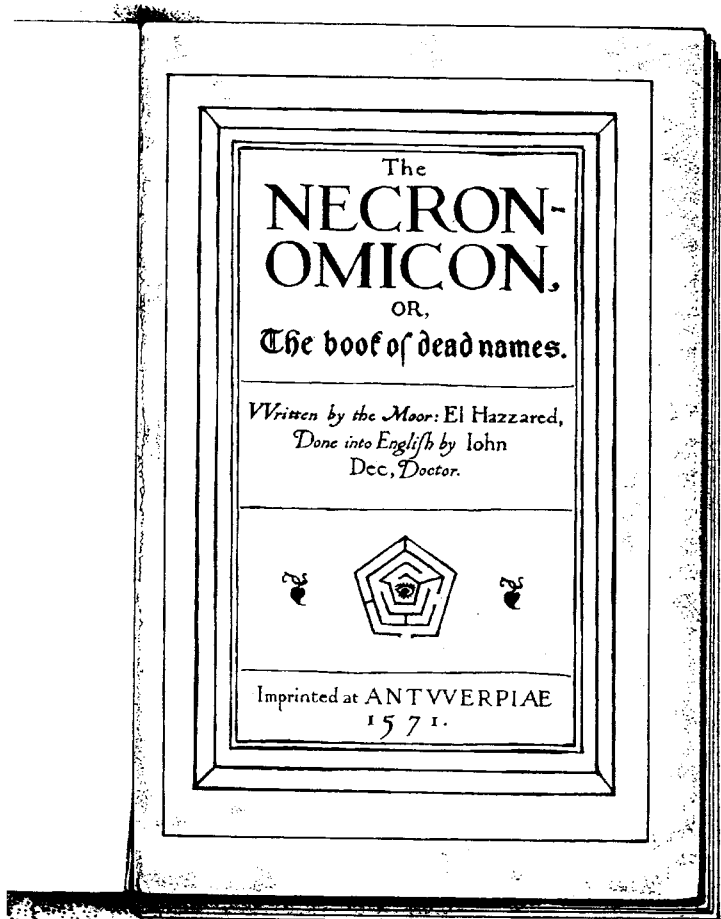
The *Rig-Veda* describes the Soma Rasa – the juice of the Soma plant – as 'amrita', akin to ambrosia, which after long preparation has an astounding effect on the body, no less than the 'roar of a bull', revitalizing sex and healing energies. The zenith of Indian alchemy was the tantric renaissance from 700 to 1300, which focused on the affinities between the body and the cosmos and on attuning the body with metal, air and fire: the metal was 'rasa', mercury; the air was breathing exercises; the fire was sun meditation. In theory, mercury alone would combine with air, blood, semen or ashes to produce the transcendental state, but in practice other ingredients were added: mica, sulphur and orpia. The chief alchemical book was the *Rasarnava*, c. AD1200, a tantric treatise describing 18 mercurial processes.

Natija

Derived from the Arabic meaning the 'conclusions' or results of philosophy that is, alchemy, transmuted thought, the manifestations of creation and the realization of the Logos. Maslama in his *Ghayat* (tenth century), Maimonides in his *Guide for the Perplexed* (c. 1200), Pico della Mirandola in his *Conclusiones Philosophicae, Cabalisticae et Theologicae* (Rome, 1486) and Eirenaeus Philalethes in his *Ripley Revived* (1678), all wrote about 'conclusions': alchemy, or the physical results of cabalistic thought.

Necronomicon

Al Azif, the grimoire supposedly composed in 730 at Damascus by Abdul Alhazred, under the



The title-page of the *Necronomicon*, the grimoire supposedly translated by John Dee and printed in Antwerp.



Umayyad caliphate, and translated in Greek as the *Necronomicon* (The Book of Dead Names) in 950 by Theodoros Philatelas. The tale goes that Patriarch Michael had the book burned in 1050, but secret copies were rescued and translated from Greek into Latin by Olaus Wormius in 1228. Pope Gregory IX (reigned 1227–41) put an embargo on both Latin and Greek editions in 1232, but a Black Letter edition appeared in Germany c. 1440, and the Greek version was printed in Italy between 1500 and 1550.

The myth ties up too neatly, in that John Dee is supposed to have translated the *Necronomicon* as *The Book of Dead Names*, and had it published at Antwerp (1571) by his friend, Silvius, who had already published Dee's *Monas Hieroglyphica* (1564).

Neoplatonism

The mystic philosophy of certain schools that promoted the teaching of Plato yet modified it in various ways. More specifically, the Neoplatonists who influenced Renaissance alchemists most were: Plotinus (204–270), Porphyry (232–304) and Proclus (410–484). The later Neoplatonists in Syria and Baghdad, such as Hunayn and son, translated Plato and Aristotle for the Latin scholars in Europe in the Middle Ages. For alchemists it was their cosmologies and 'elements' that appealed. In Italy the most notable early Renaissance Neoplatonist was Marsilio Ficino who, on Cosimo de Medici's orders in 1463, translated not only Plato but the *Hermetic Corpus*, which profoundly influenced Lull, Reuchlin, Agrippa, Dee and all 'magical alchemists'. See also Pimander.

Nestorians

The chief transmitters of Alexandrian alchemy to the Arabs, they were Syriac-speaking Christian followers of Nestorius, Patriarch of Constantinople, who had founded the sect in AD428. They were condemned at the Council of

Ephesus in 431 as heretics and started on their long haul of fleeing persecution – first to Edessa, from where they were ejected in 489, then to Nisiblis, then to Jundeshapur, Damascus and Baghdad, where they formed the great centres of science and translation under the Umayyad and Abbasid caliphs. They penetrated the heart of Asia, even China, and were particularly industrious. Imbued with the Egyptian mysteries and Greek Classics, the Nestorians disseminated alchemical tracts to Islam after Egypt had become either fanatically Christian or drowned with occultism and debased magic. Their language, Syriac (a late Aramaic or Coptic development from Egyptian) had gradually taken over from Greek as the language of the educated classes. See also Baghdad; Damascus; Jundeshapur; Syriac.

Newton, Sir Isaac

(b. Christmas Day, 1642, Woolsthorpe, Lincolnshire; d. 20 March 1727, London)

Michael White, Newton's latest biographer, reminded listeners to BBC Radio 4 in April 1996 that Newton was a black, dark figure, an unpleasant man. He was damaged in childhood; his father died before he was born, his mother married again and his stepfather didn't like him. Psychological damage was done.

Newton originally went to train as an Anglican clergyman at Cambridge, the traditional place for clergy to receive their education. It took a long time for the University to recover from the intellectual shock of Newton, who rebuilt a world of reason that had been lost since the early Renaissance.

Interestingly, J.G. Crowther, historian of the Cavendish Laboratory, reports that 'Newton's works were greatly esteemed but were taught rather as the theologians taught the Bible'.

With much fact and a little fiction, Newton's official life has been well documented:



Newton's loyal colleague, Edmund Halley, who put up the money for Newton's *Principia* to be published in 1687.



Newton, Sir Isaac

THE
CHRONOLOGY
OF
ANCIENT KINGDOMS
AMENDED.

To which is Prefix'd,
*A SHORT CHRONICLE from the First
Memory of Things in Europe, to the Conquest
of Persia by Alexander the Great.*

By Sir ISAAC NEWTON.

L O N D O N :

Printed for J. Tonson, J. Osborn, and T. Longman ;
and Sold by Messieurs Smith and Bruce, Booksellers
on the *Blind Key* in *Dublin*. MDCCXXVIII.

Title-page of Newton's book that was inspired by a translation of the Arabian alchemist Al-Biruni's *Chronology of Ancient Kingdoms*.

- how, on his mother's Lincolnshire farm as the world's worst farmer, he sowed his calculus seeds;
- how he watched an apple fall (fact, says Newton), and linked it to the 'push and pull' of the moon;

- how he worked on gravity, inspired by the boy Horrocks's corrected *Tables on the Transits of Venus*, which Kepler had got slightly wrong;
- how he turned to prisms and Boyle's book on colours;
- how he fell in and out with Hooke and the Royal Society;
- how Halley paid for his *Principia* to be published (in Latin, 1687), when the dithery Royal Society reneged on its promise to do so;
- how he sat as a Member of Parliament and everyone waited with bated breath for the great man's speech, but all he said was could the window be shut because there was a slight draught;
- how, as Master of the Mint, he was the scourge of counterfeiters;
- how he died at 84, with all his teeth, his eyes and hearing intact, and was buried in glory in Westminster Abbey.

The known Newton suggests three words: Calculus, Light, Gravitation, and a wonderful equation

$$F = \frac{gm_1m_2}{d^2}$$

The unknown Newton was what he hid to keep Cambridge happy. Not to upset the Christian applecart, he toned down his views that ancient Egypt had a supreme mathematical and esoteric wisdom. Significantly, in order to arrive at his laws on calculus, the composition of light and universal gravitation, Newton studied obsessively the Greek philosophers and ancient Egyptian Hermeticists, plus masters of Islamic thought such as Al-Biruni, author of the original *Chronology of Ancient Kingdoms*, a superlative history of religion and folklore going back to the Egyptians and the Old Testament.

By 1671 Newton was sure that the Egyptians knew about atoms, gravitation and heliocentricity, and that the Great Pyramid incorporated specific fractions of latitude.

T

HE FOUR ELEMENTS

Earth, water, fire and air were the basic stuff of the universe, created out of chaos, that could be transformed by alchemy.

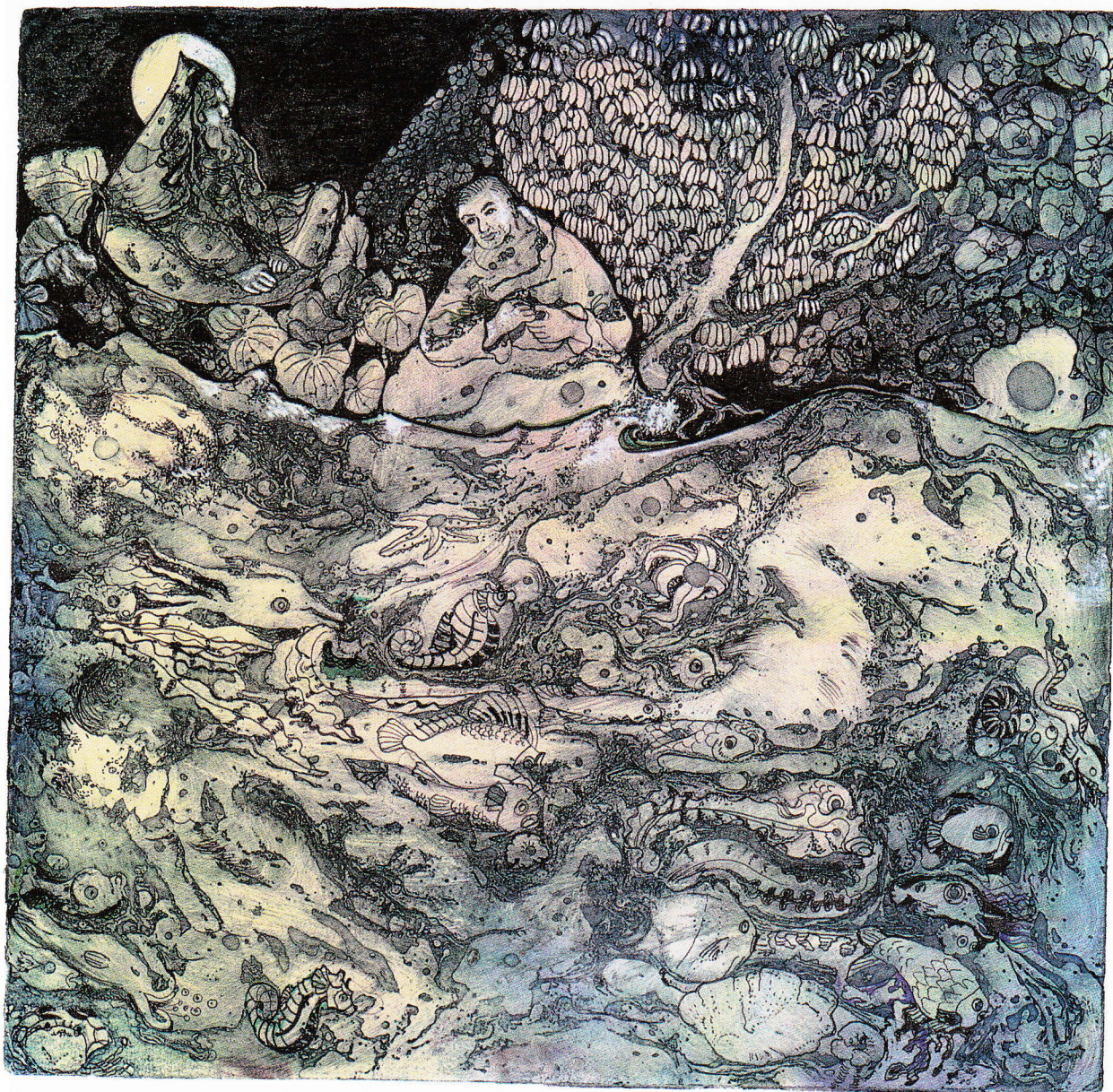
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1 EARTH, the base clay or fertile 'keme' of alchemy, symbolized in the pilgrim's 'dry' path along which he could reach the heights of transformation.

Artist: Diana Fernando



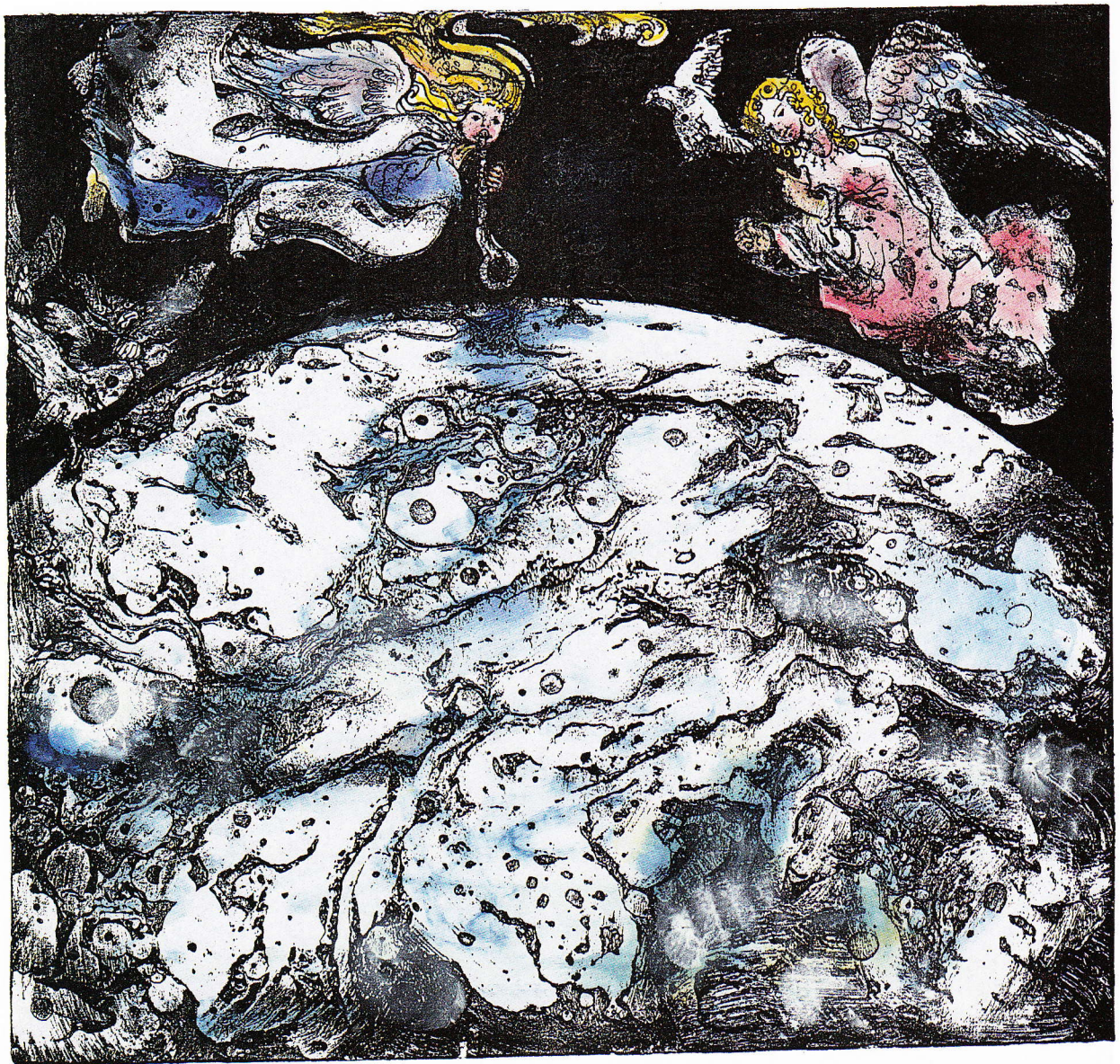
2 WATER, symbolizing alchemical flux, distillation, dew, rivers of fish (subconscious treasures) and alchemy via baptism, the 'humid' path. Artist: Diana Fernando



3 FIRE, symbolizing alchemy of firing, calcination, sulphur, and the Ancient Greek
Priests of Fire. Artist: Diana Fernando



4 AIR, symbolizing alchemy via the intellect, Breath of God, or the angelic beings of John Dee, Thomas Vaughan and Jakob Boehme. Artist: Diana Fernando





Although he wrote about Egypt in his *Chronology of Ancient Kingdoms Amended*, and touched on his admiration of ancient Egyptian measurement in his *Principia*, the former, a mere shadow of Al-Biruni, was not published until just after his death, and the English version of *Principia* was not published until 1729 – 42 years after the original manuscript!

It was apparent how he had proved the new (calculus) by means of the old (geometry).

In order for Newton to keep the post of Professor of Mathematics at Cambridge, the public theological front had to be sustained (although Newton was allowed not to be ordained). To proclaim the ancient Greeks as fathers of European civilization was fine. But the ancient Egyptians! That was a very uncomfortable thought.

The secret Newton had two abiding passions: alchemy and theology. His surviving alchemical manuscripts of over 650,000 words prove him to be an adept, having assimilated the essence of alchemical literature. The greater part of his time at Cambridge was spent among retorts and furnaces in his own laboratory that he had equipped himself.

His nephew, Dr Humphrey Newton, who was his assistant from 1685 until 1690, describes how he would start the Great Work at the Spring Equinox at 3 am and again another Operation in autumn at 'Fall of ye Leaf, each session lasting about six weeks in his Elaboratory, the Fire scarcely going out either night or day, he siting up one Night, as I did another, till he had finished his Chymical Experiments'. Newton did this with such exactness and pains that Humphrey thought 'he aimed at something beyond ye Reach of humane Art and Industry'.

Newton himself intimated that 'such a secret was not to be communicated without immense damage to ye world, if there would be any verity in ye Hermetic writers'. Newton hoped that Boyle wouldn't split. Although Boyle was sympathetic to Newton's alchemy, and indeed, with Newton, had petitioned Parliament to bring in a bill forbidding the

disclosure of transmutation lest the market value of gold collapse; he was, after all, the author of *The Sceptical Chemist*.

Newton read alchemical texts avidly, frequently making copious transcriptions. He owned Vaughan's translation of the Rosicrucian *Fama* and he had bought a copy of Ashmole's *Theatrum Chemicum Britannicum* for £1.8s.0d. in 1669. This he studied ceaselessly, sprinkling it with his annotations and copying large sections out by hand. He found Maier's *Symbola Aureae Mensae* absorbing and was particularly attracted to the last of its 12 'sophic apostles', Michael Sendivogius, whose own work, *The New Chymical Light*, Newton possessed and commented on, down the margins. Like Boyle, Newton took Eirenaeus Philalethes seriously. For 20 years, he had *The Open Entrance* as his bedside book, marking every page and adding loose sheets of his own comments on the alchemical experiments he had performed according to Eirenaeus.

Newton's profound theological occupation was with the One, with Divine Unity as revealed in nature. His alchemical aspirations led him to brooding exploration of the Bible, particularly the Prophets, the Book of Daniel, and the Apocalypse. His *Interpretations of the Prophecies* and other theological writings amounting to 1.25 million words lying in the Maynard Keynes Collection are largely 'unwept, unhonoured, and unsung'. See also Boyle; Eirenaeus Philalethes.

Nicholas of Cusa (1401–64)

Born Nicholas Krebs of Kues (Cues or Cusa), near Trier in the Rhineland, this philosophical alchemist studied law at Heidelberg, then graduated from Padua in 1418, before taking the cloth.

Nicholas was a brilliant mathematician and intuitive astronomer who believed in a heliocentric world almost a century before Copernicus but who was never charged with heresy since he never set out to prove anything

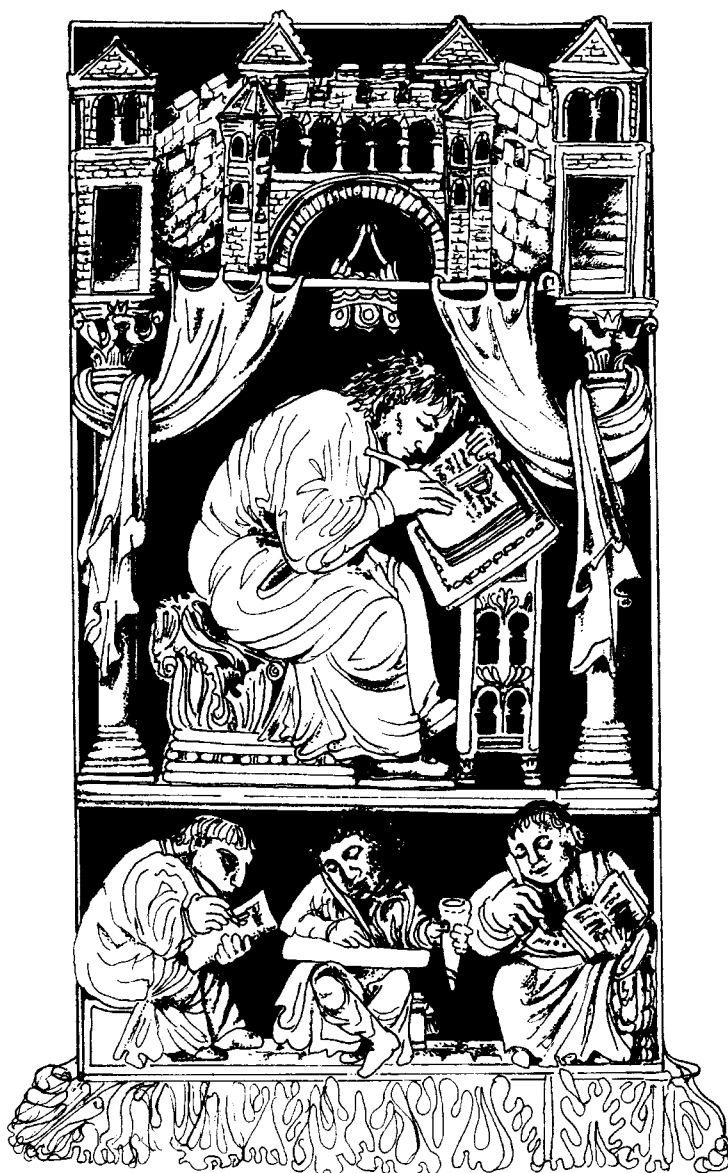


Nicholas of Cusa

scientifically. He merely quotes Boethius with approval: 'Knowledge of divine things is impossible without mathematics.'

His insights are uncannily modern: space is infinite, it is neither up nor down; the earth spins on its own axis and it turns around the sun. Moreover, the myriad stars observable with the naked eye are in themselves solar systems with their own planets.

Nicholas of Cusa in his monastic scriptorium



Outwardly, Nicholas stayed well within the bournes of Christianity, even becoming a Cardinal. But his interior life was that of a spiritual alchemist.

He observed that all creeds and races of mankind – Greeks, Latins, Arabs, Jews and Scythians – worshipped the same truth. From his vantage-point in Trier and Padua (long the seat of philosophy and medical thought in Italy), Nicholas rubbed shoulders with Jewish lawyers, Arabic scientists and Christian doctors and ecclesiasts, noting how their different faiths operated. He even accepted circumcision and idolatry as valid, provided that their symbolic truths were remembered.

Like William of Ockham before him, Nicholas regarded scholasticism as more harmful than helpful to theology. His famous book *De Docta Ignorantia* (On Learned Ignorance, a paradoxical disclaimer of his beliefs to avoid attack by the Inquisition, perhaps) draws on Maimonides's *Guide for the Perplexed* in his conviction that the 'conclusions' one arrives at through reason are the same as those one arrives at through revealed truth.

Nicholas founded a library at Cusa where scholars would go on pilgrimages. There is a record of Bishop Dalberg, friend of the alchemist Trithemius, leading Reuchlin and party in 1496 on an expedition to inspect the two most important and rare libraries in Germany – that of Nicholas of Cusa, and that of Trithemius of Spanheim – 'their course was from Worms to Oppenheim ... by boat to Coblenz and up the Moselle to Cues', stopping to inspect the precious manuscripts from the Greek, Hebrew and Arab masters before journeying on over the hills to Kreuznach and Spanheim.

Nicholas's avant-garde work, *The Vision of God*, postulating that you cannot parcel out God with reason alone any more than you can pin down the universe (God is not the same as his divine attributes, but transcends them) was translated by Dr John Everard (1582–1640) – who also translated the *Pimander* – in the



1630s. His *Vision* was appreciated more by the humanists of seventeenth-century England than the pedagogues of fifteenth-century Germany.

Norton, Thomas

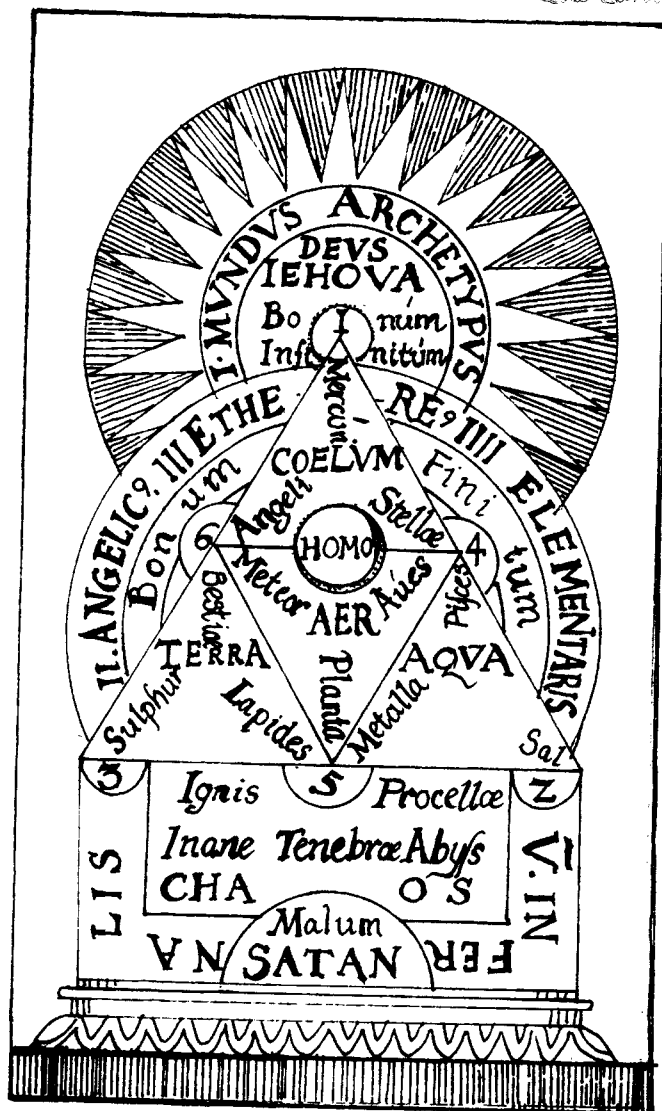
(b. fifteenth century, Bristol)

An English alchemist who is seen through his works and the enthusiasm of others, notably Ashmole and Michael Maier. The first entry in Elias Ashmole's *Theatrum Chemicum Britannicum* (1652) is Norton's *Ordinall*.

Nosologia Harmonia

A large alchemical collection published in 1615 and 1616 by Henry Petreus of Marburg. He operated under the great patron of the Calvinist University of Marburg, Moritz of Hesse-Kassel, who supported Rosicrucian alchemists and physicians, such as Michael Maier. Oswald Croll had been a student there in the 1570s.

Alchemical cosmology, in a work ascribed to Norton.



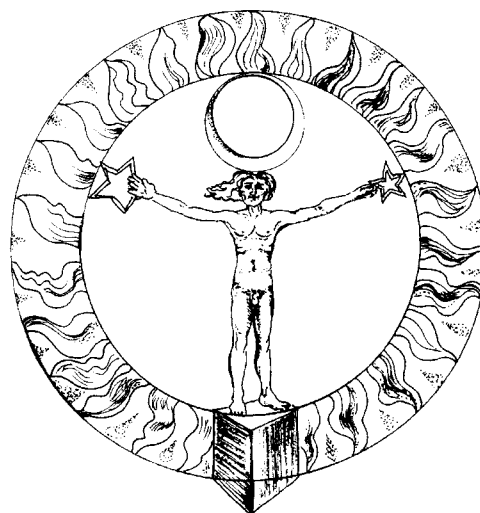
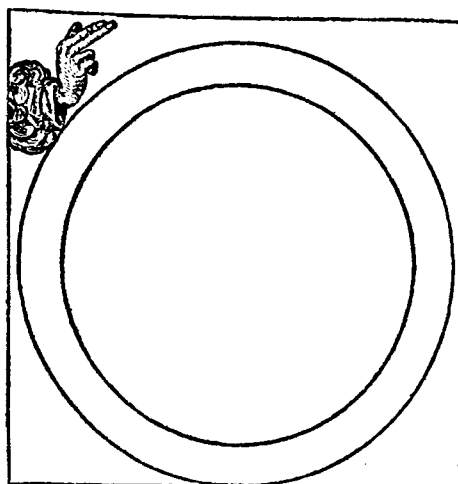


O

- O is a paradox of symbols;
- O is the symbol of eternal recurrence, without beginning or end;
- O is the ouroboros, whose end is in its beginning;
- O is oneness;
- O is zero;
- O is omega, the end;
- O is the full moon;
- O is the sun;
- O is the halo behind a saint;
- O is the world, the universe, the globe;
- O is the metallic alumen, aluminium;
- O is the Platonic solid, the sphere;
- O is the mathematical circle, the most complete shape;
- O is the chivalric Round Table;
- O is the humanistic container of man;
- O is the architectural dome, the oast house, the Round Tower, the orchestra, the arena, the 'wooden O', the circus, the alchemical theatre or basilica;
- O is alchemical gold, perfection.

See also Ouroboros.

The creation of the world, after a fifteenth-century woodcut.



Man in the cosmos, on a cube of earth, under the moon, within the sphere of the sun.

Odo, Abbot of Cluny (926–942)

A shadowy mystic, the second Abbot of Cluny and creator of its fame, was a pupil of St Remigius of Auxerre, Rheims and Paris. A Hebrew and Latin scholar and interpreter of the Old Testament, Odo became Abbot of the Burgundian Abbey of Cluny, which had been founded by esoteric master-builders who understood the secrets of alchemical transformation.

He made frequent trips over the Alps to Italy, and it is surmised that he had regular contact with the Hermetic Brotherhood of the Comacenes, whose ancestors had insulated themselves in the middle of Lake Como to escape the decrees against magic by Diocletian. The Comacenes studied Sacred Geometry and influenced architecture all over western Europe from the time of Charlemagne to the founding of the first Gothic cathedral, Cluny, in 1095. Odo would have exchanged knowledge with them on the art of transformational building, even though he was 150 years too soon to witness the great new cathedral grow on the site of his abbey.



Ogdoad

The eight early Egyptian gods of the city of Hermopolis. Thoth or Hermes (patron of alchemy) was called the Master of the City of Eight, the Ogdoad. The eight over which he presided were four pairs of primordial deities: Night, Obscurity, Secret and Eternity. These dim and distant deities, frog- or serpent-headed, represented chaos emerging from the Kemi, black Nile's slime of creation.

Ogive

The Gothic cathedral arch, supported more by pillars, less by walls. The quirky historian, Hendrik van Loon, believes the Gothic arch was Muslim-inspired, with its special vaulted space having transformational effects on those who stand beneath it.

Olympiodoros

One of the oldest Greek alchemists, along with Zosimos, who practised the crafts of metallurgy, chrysopoeia and glass-cutting. He wrote a tract on *The Sacred Art*, which was basically a commentary on Zosimos as the 'crown of philosophers who preaches union with the Divine and disdainful rejection of matter'.

Ophites

A Gnostic sect arising in the early Christian era. The Church Father, Origen of Alexandria (AD185-254) launched a fierce attack on Celsus the pagan, who defended the sect. Their basic belief was bound up with their cosmology of a world surrounded by the snake Leviathan; a world therefore enclosed in its own 'barrier of evil', a world from which it was possible to escape only by blasphemous imprecations to Christ and invocations and magical passwords to the Archons or entities that guarded the gates of each sphere through which the soul might ascend. In his impassioned attack on the

Roman physician Celsus, Origen quotes an Ophite liturgy in which each Archon is invoked in turn. Far from putting off his readers, Origen's passages whetted the appetite for the very cult against which he was inveighing. His *Against Celsus* was in danger of being more popular than his *Hexapla*, a six-language adaptation of the Old Testament. Behind the work of this seemingly Christian eunuch lay a sorcerer's handbook for the magus and curious alchemist.

Opifex

Meaning 'the maker of works' or 'the Creator', the word was used by Cornelius Agrippa in the Third Book of his *Occult Philosophy* to refer to God the One Supreme Creator who is beyond all worlds, even beyond the world of angelic spirits who can be called up through celestial magic.

Oporinus, Johann (sixteenth century)

A remarkable typographer and printer of alchemical and medical works in Switzerland. He was Paracelsus's pupil who transcribed the sage's words. As Oporinus maintained, Paracelsus always used to dictate his work, and this so rapidly that 'you'd think it was the devil speaking in him!'

He was a friend of the great anatomist Vesalius, whose *De Humani Corporis Fabrica Libri Septem* he typeset and printed (Basel, 1543).

Ordinall

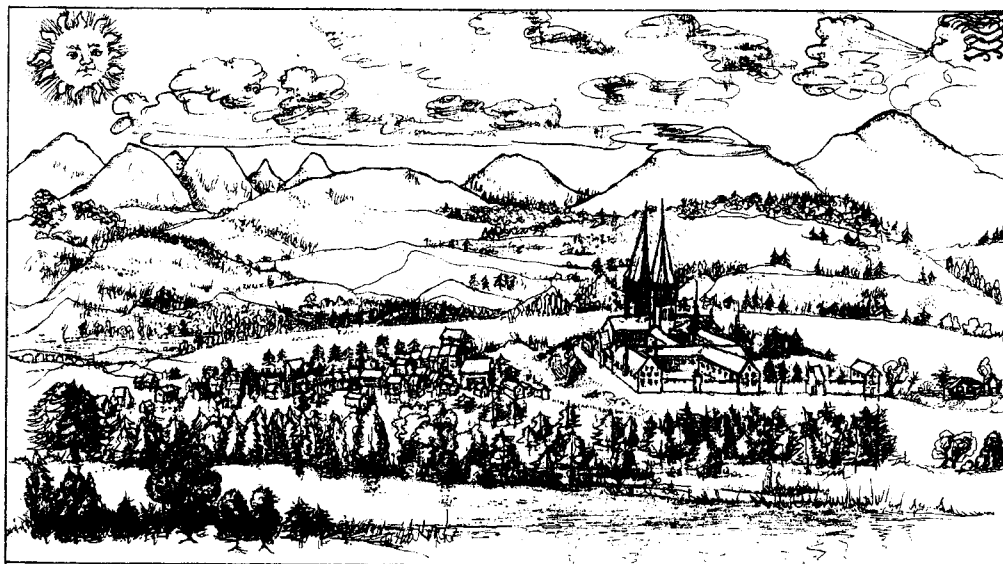
This alchemical narrative was written in 1477, in rhyming couplets, by Thomas Norton, a student of George Ripley. The title has a religious connotation: a service book of alchemy – a Crede-Mihi. The poem is a progressive description of the stages of the Great Work, leading to 'ordination' (blessed, transformed state).

Extraordinarily, it was first published in a Latin verse translation by Michael Maier as one



Oriatrike, or Physic Refined

Einsiedeln, the birthplace of Paracelsus, showing the Benedictine monastery.



of his three *Golden Tripod* tracts (Lucas Jennis, 1618). Then Jennis published it again in 1625 in German verse. It was not published in its original English until Ashmole gave it pride of place in his *Theatrum Chemicum Britannicum* of 1652. Ashmole explains in his Introduction how Maier had come over to England expressly to pick up a copy of Norton's *Ordinall* and to learn English well enough to be able to translate it into Latin. Ashmole praised this 100-page alchemical poem of the trials and tribulations of an alchemist. It is unlikely that *Ordinall* would enjoy the same accolades today. See also Ashmole; Jennis; Maier; Norton.

Oriatrike, or Physic Refined

(London, 1662)

The English version by John Chandler of the *Ortus Medicinæ* of Jan Baptista Van Helmont, the 'gas' man.

Orpheus

The mythical Orpheus was able to transform the woods and wildernesses of Greece and enchant animals, birds and fish with the harmony from the seven strings of his lyre. To

his songs, Amphion raised the walls of Thebes, the city of initiation. Orpheus gave life to numbers, and he sailed as an Argonaut to Colchis, the land of initiates. Through losing his wife Euridice in death he suffered, became victim of his chastity and was brutalized by Bacchantes.

The Orphic cult developed from this. It explained the mixture of good and evil in human nature. Like Pythagoreanism, it taught

Orpheus, after the frontispiece of a Spanish lute tablature.





the transmigration of souls and moral purity. Later the Orphic cult degenerated into sacrificial rituals, that included the tearing apart and devouring of animals.

By the time of the Renaissance, Orpheus was treated as sorcerer and enchanter. Ascribed to him, as to Solomon, was knowledge of herbs, minerals, 'celestial medicine' and the Philosopher's Stone.

Pico stated in his *Cabalistic Conclusions* that the Hymns of Orpheus had as much power as the Psalms of David to induce higher states of being. Clearly Renaissance alchemists looked beyond Neoplatonism to Plato himself, Pythagoras, Orpheus and Egypt for their philosophy and magic.

Orthelius, Andreas

(early seventeenth century)

An acolyte of Michael Sendivogius, the Polish alchemist should not be confused with John Dee's Dutch geographer friend, Ortelius). Orthelius commented on and illustrated the great Pole's *Novum Lumen Chymicum* in the German edition (Philip Wittel, Erfurt, 1624). Orthelius's figures and commentaries on this same work of Sendivogius were also published in Zetzner's *Theatrum Chemicum* (1624) and in German in Manget's *Bibliotheca Chemica Curiosa* (1702).

Orthelius' delightful little woodcuts of the alchemical Operation are more in the style of sixteenth- than seventeenth-century German illustrations. Graphic and simple, the 12 pictures divide into three groups of four, demonstrating, first, the influences of the lower realms (e.g. earth) on the making of the Stone; second, the influences of the upper realms (sun, moon, stars) on the Stone; and third, the making of the powder of projection.

Orthopraxy

In alchemy, Right Conduct (Jewish slant), as opposed to Orthodoxy, Right Opinion (Greek slant). Philo of Alexandria wore two hats:

Jewish and Greek. With his Greek hat he stressed orthodoxy; with his Hebrew hat he stressed orthopraxy.

Ultimately, Philo favoured the latter, insofar as God's Word, 'verbum', was word *and* deed/conduct.

Orthorhombic

Having three unequal axes at right angles to each other; an adjective describing the particular structure and shape of sulphur crystals, in relation to certain musical notes that cause them.

It has long been suspected that sounds can alter cell structure, and some composers, such as Bach, have long known that musical vibrations can be translated into the crystal forms of certain elements such as salt, mercury and sulphur. Rudolf Steiner and his followers have spoken of an energy recognized as 'sound or chemical ether'. For music therapists this has immense possibilities for attuning the body. They see the three archetypal concepts in music – rhythm, melody and harmony – in terms of the three alchemical principles of salt, mercury and sulphur, respectively, which in turn have special crystal shapes relating to man. Cubic salt relates to man's body, tetrahedral mercury to his spirit and rhomboidal sulphur to his soul. Thus do the crystals have affinities with the Platonic solids of Pythagoras.

Ortus Medicinae

The title *Ortus Medicinae* (Source of Medicine) was given to the collected works of Jan Baptista Van Helmont (1577–1644), the Flemish physician-alchemist, by his son Franciscus Mercurius. Unfortunately, Van Helmont wrote in such an obscure style that by the time his son had waded through all his father's manuscripts and prepared them for publication as *Ortus Medicina, Vel Opera et Opuscula Omnia* (1648 and 1659), his father was dead. See also Chlorophyll; Oriatrike; Van Helmont.



Ostanes

Ostanes

There are several alchemists of this name, the best known being the third-century bc Persian alchemist, reputed by Pliny to have introduced magic among the Greeks when he accompanied Xerxes on his expeditions in the Graeco-Persian wars.

He apparently talked about the 'Baetylos', the 'Stone with a soul' and the 'Stone that has a spirit' to be found on the banks of the Nile.

The Greeks later adopted this idea of divine stones, *lithoi empsychoi*. These stones, set up in holy places, were revered and decorated by the general public; in private hands, they were used for divination and magic and associated with the herm.

An Ostanes is included, along with Stephanos, as one of the early Alexandrian alchemists in the *Corpus Hermeticum*. This particular Ostanes wrote on tincturing, and the colouring of metals. In *The Divine and Sacred Art* he listed the materials that made up the 'Divine Water', which is said 'to raise the dead and destroy the living'. A few drops of it would make lead take on the nature of gold, God willing! Among the Arabian treatises, a *Book of Ostanes* turned up with the *Works of Geber*.

Ostrich

The name given to any one of the acids used in the processes of transmuting ordinary gold and ordinary silver into their philosophic counterparts. The 'Stomach of the ostrich' was capable of digesting anything.

Oven

The alchemical furnace or athanor, which used slow-burning coke or dung for the first Operation, calcination.



A rather grand, three-tier oven (inspired by the introductory emblem in the *Book of Lambspring*).

Ozymandias

A legendary king of Egypt, actually King Rameses II (1290–1224bc), the greatest temple-builder in all Egypt's history. Rameses II is said to have possessed the secret of the Magnum Opus. He had a monument to himself constructed, which was surrounded by a circular wall in solid gold, 365 cubits in circumference (1 cubit = 46cm/18in).

Shelley's sonnet (opposite) represents not the actual history, but the spirit of Ozymandias. The huge statue of Rameses II that lies shattered in giant pieces over the courtyard of the Rameseum (the mortuary temple complex) is what inspired Shelley, if only by proxy.



Ozymandias

Percy Bysshe Shelley

I met a traveller from an antique land
Who said: Two vast and trunkless legs of stone
Stand in the desert. Near them, on the sand,
Half sunk, a shatter'd visage lies, whose frown
And wrinkled lip and sneer of cold command,
Tell that its sculptor well those passions read
Which yet survive, stamp'd on these lifeless things,
The hand that mock'd them, and the heart that fed;
And on the pedestal these words appear:
'My name is Ozymandias, king of kings:
Look on my works, ye Mighty, and despair!'
Nothing beside remains. Round the decay
Of that colossal wreck, boundless and bare,
The lone and level sands stretch far away.



Mummy of Rameses II. Shelley's poem reflects not so much the historical reality of the alchemist-king as the futility of overbearing tyranny.



Palatinate

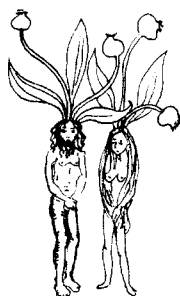
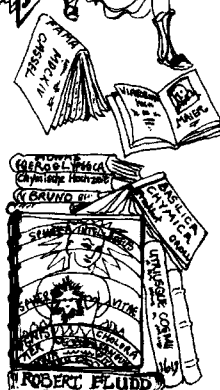
The German Rhineland province in which flourished a sort of seventeenth-century alchemical New Age. Alternative cults boomed – the Rosicrucians, the Bohemian Brethren, the Family of Love – was governed by the sympathetic dukes of the Palatinate and nearby Hesse, Württemberg and Bohemia.



The Palatinate

Much alchemical literature was published by the astonishing De Bry family, which would have been banned by the uneasy James I in England or Catholic Italy or Spain.

Alchemists, such as the German Michael Maier the English Robert Fludd and John Dee, who spent three years angel-magicking his way round Bohemia, actually thought a transformation of mankind would be possible: physically,



through the marriage in 1613 of Frederick V, Elector Palatine, to Elizabeth, daughter of James I of England, and alchemically, through Andreae's *Chymical Wedding* (Strasburg, 1616) and a host of other books. So a New Age was heralded, uniting England and the Rhine in an alchemical wedding, conducted by Hermetic adepts. Sadly, all this was shattered by the Thirty Years' War (1618–48).

Palingenesis

Regeneration; the art of bringing a plant back to life from its ashes. Paracelsus held that when a physical entity is destroyed, its visible 'astral' form remains.

Experimenting with dead flowers on blotting-paper, Paracelsus did, in effect, what every child does to make mustard seed sprout, or what twentieth-century Egyptologists have done to bring mummified roses back to life. See also Booz.

Pan



The son of Mercury was popularized into folk-alchemy as the transforming power in nature. His head and body form the hieroglyph of the Mercury of the Philosophers, at once solar and lunar. The star on the right is the hieroglyph for harmoniac salt, the third component of the Alchemical Art, the component of transforming matter.



Pandects

Medical compendia by Syriac and Arabian scholars, written between the fifth and eighth centuries. Full of astrological and alchemical lore, they were typical of pre-Islamic and Arabian learning. The best known pandects were by Ahron, a Christian priest-physician in Alexandria just before the rise of Islam. Probably originally in Greek, Ahron's *Pandects* were evidently translated into Syriac, before being translated into Arabic by the Persian Jew, Masarjawaih, at the Academy of Jundeshapur, the seat of the new Islamic learning. See also Jundeshapur; Syriac.

Papyrus

A number of Egyptian papyri with alchemical content have been preserved, the oldest being found at Luxor in 1873 by Georg Ebers, and thought to date to around 1550BC, with text referring even further back to Imhotep, architect to King Zoser of the Third Dynasty, and later identified with the alchemist-healer Esclepius. It was thought that hieroglyphics were the script of the mysteries. Renaissance alchemists and thinkers such as Giordano Bruno, saw the revival of the true magical Egyptian religion as a means of reuniting Christendom. See also Esclepius; Leyden Papyrus.

Paracelsus (1493-1541)

Arguably the greatest alchemist of all times. 'Always drunk and always lucid,' this irregular sixteenth-century Swiss vagrant was turfed out of seats of learning by one outraged doctor after another, yet he was posthumously idolized.

Born in the small village of Einsiedeln, significant for its pilgrimages and its Black Madonna, he was the only child of a pious peasant mother, whose family lived on local Benedictine Abbey land, and Wilhelm van Hohenheim, a bastard son of the Swabian

House of Baumast. Philippus Aureolus Theophrastus Bombastus von Hohenheim, called Paracelsus, was brought up in deep piety and yet with high aspirations for healing humanity. He learned his early lore from his father, a herbalist and physician. His motto, 'Learn and learn, and ask and ask, and be not ashamed,' never left him, any more than his other guiding rule, 'Learn and help'.

He picked up everything he could of ancient Greek learning, medical science, metallurgy and alchemy, and received his doctorate at Ferrara in 1515. He was a prodigious itinerant figure, knocking down false pretensions to learning wherever he went, and yet he was constantly healing, comforting and helping the sick and needy. All humanity was his workshop.

He travelled far and wide over Europe, if his own records are to be believed: Spain, Portugal,

Paracelsus' signature.



Disease as a scourge of God.



Disease, probably syphilis.

The journey through death – symbolically representing alchemical transmutation.





Paracelsus

France, England, Germany, Sweden, Moscow, Poland, Austria, Hungary, Croatia, Italy, Rhodes, Crete, Constantinople and Alexandria. He was an army surgeon in the Netherlands and in Denmark. He treated and conversed with the highborn and the lowly alike – gypsies, monks and peasants, no less than abbots, princes and knights.

In the midst of such exploits he dropped in at the best universities, Paris, Oxford, Cologne, Vienna, Padua and Bologna, gleaning all the latest in medical practice and constantly stirring up trouble with his criticism of time-honoured ideas and his inspired experiments in wound-surgery and antisepsis. He scorned stuffy academics and traditional doctors who based their cures on the theories of ancient Greek physicians such as Galen or Aretaeus. Significantly, he was called the Luther of Physicians, not only for his revolutionary medicine but also for his religious intensity. He saw the tragedy of human life as well as the glory. He saw himself as the instrument of God and as the patient, too. He mixed with all humanity but saw himself as an outsider. 'I am different; let this not upset you,' are his startling words in his 'Credo' of his *Astronomia Magna*. Paracelsus's approach was alchemical; he performed a kind of 'vital chemistry' in which God was ever present, 'for God Himself is the true physician and the true medicine'. His laboratory was indeed his oratory, and God 'enjoined the physician to fight against the transience of things'. Paracelsus described man's nature as determined by his three bodies: elemental, emotional and spiritual, and all bodies are interrelated – man, earth, cosmos – to God.

The treatment of the plague, gout, syphilis, epilepsy – all diseases – are sacred tasks, just as much as preparing herbs, smelting metals, analysing salts in mineral waters. Moreover, God has created all things in their raw state to be used and taken to their next stage by man: God is the Great Physician who:

created the ore but did not carry it to its

perfect state; He has charged the miners with the task of refining it. In the same way, He enjoined the physician to purify man's body, from which purification man emerges as indestructible as gold. This is an action which, like that performed by fire on gold, frees man from the impurities that he himself does not know. And it is like such fire that medicine should act.

The basic idea of purifying gold of its dross underlies the whole Paracelsan universe. Paracelsus's greatest achievement is in using alchemy for medicine not gold-making. He is the forerunner of not only homeopathy, but antisepsis, microchemistry, and chemotherapy. It was not the artificial extraction of gold out of baser metals, but the higher chemistry by which substances were 'translated' that constituted Paracelsus's gold-making. Just as the spirit induced changes in the soul and body by impressing its 'nature' or signature on them, so alchemical gold effected changes in its earth-bound counterpart, in diseased bodies. Vegetable and animal life equally could be transmuted, even as grapes turned into wine or milk into butter!

In the course of his eccentric life, Paracelsus wrote voluminously – or rather, dictated in a mocking mixture of dog-Latin and German to his students. In spite of distortions, simplicities, old wives' tales and diatribes against the 'foul sculleries' of apothecaries and 'belly-crawling' doctors, his works are strangely modern and rivetingly eloquent. Roughly half are medical/astrological/alchemical and half are theological.

Nothing was edited or collected in his lifetime – the handwriting is turbulently obscure on the surviving manuscripts. For somebody who, in his own words, is 'not subtly spun' and not educated to spin silk, Paracelsus's writing is phenomenal. His *Astronomia Magna* and his *Philosophia Magna* are vast rambling outpourings on the nature of the universe, God, and divine operations: alchemical, astrological and medical.

Paradox

A seemingly absurd statement or phenomenon; a contradiction in terms that holds a truth. Alchemically, it is the reconciliation of opposites via Hermes the creative imagination. Hermes is himself a paradox, being both quicksilver, a metal-based substance, and mercury, a liquid, volatile essence. From Hermes and Aphrodite was born the hermaphrodite, the man-woman, combining the male and female principle in the highest stage of the alchemical process into wholeness. The Philosopher's Stone is paradoxically called the hydrolith, the waterstone, the 'stone that is no stone'. It is base yet noble, immature yet perfect, cheap yet precious.

The basic tenet of the alchemical Operation is that parts are broken down in order to be put together again: separation before unification. In modern terms, the goal of the alchemist was to heal the split in consciousness between the conscious Ego and the unconscious Intuition. The way to do it was to differentiate the opposites, then to express both sides in one breath, and finally to raise and thereby transform the vibrations above the split.

Parzival

Percival's quest for the Holy Grail is the alchemist's quest for the Philosopher's Stone. The legend of Percival has mysterious origins. In the thirteenth century Wolfram van Eschenbach's poem *Parzival* the Grail is a stone, guarded by celebrate initiates. Parzival wanders all over Spain and the Middle East in search of it, guided by 'Conduit-Armour', the female psychopomp, just as the medieval alchemists searched for the Stone that would bring them the elixir of life.

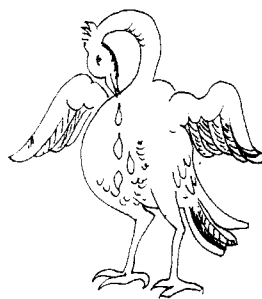
Peacock

A bird that symbolizes volatility, as do all winged creatures. Near the end of the alchemical Operation the 'peacock's tail' would

appear: the many-coloured surface on the molten metals heralding the nearness of the final stage of transformation and meaning that the volatile parts of the residue were sublimed.

Pelican

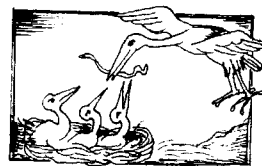
A special still for cohobation, so called for obvious reasons, alchemical and ornithological, and for less obvious reasons: mythical. According to a twelfth-century bestiary, the pelican's name derives from its habitat on the Nile in Egypt, which in Greek is Canopus.



ornithological



alchemical



mythical

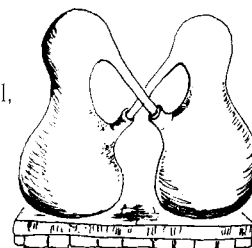
Although the female kills her young in self-defence when they attack her with their fledgling wings, she resuscitates them three days later with blood from her breast which she pierces for them.

Pentacle

The five-pointed star, symbol of man, the microcosm, as compared with the six-pointed star of Solomon, symbol of the universe or macrocosm. Pentacles were used by magicians before starting a magical conjuration, and by alchemists to illustrate Hermetic books. They were particularly popular in Renaissance manuals, where would-be adepts found it easier to assimilate alchemical theory through diagram than text.

In the design for his Great Seal of Hermes, John Dee has a pentacle at its centre. Dee

Pentacle



Double pelican section



Periplus

believed this astro-alchemical hieroglyph had powerful healing effects on the mind and that, when contemplated, it could bring about wondrous inner transformations. See also Dee; Dei; Hermes.

Periplus

Initiation by stages, whereby adepts had to move from one holy place to another, as on a pilgrimage, each time becoming more enlightened. The Greek philosophers were required to visit the Egyptian temples before they could move up the scale of initiation; alchemists journeyed to Chartres or St James (St Jacques, Santiago) of Compostela, where the vibrations coming through the earth seemed to have a special transformational force. See also Compostela.

Permits

Royal or papal permits were granted to alchemists to allow them to practise 'the philosophic art of the conversion of metals'. In England, the mad young King Henry VI (reigned 1422–71) granted a permit to John Cobbe and John Mistelden to make alchemical gold. This was approved by Parliament! Providing the gold came the King's way, he did not appear to question how it was acquired. Not so his grandfather, Henry IV, who, in 1404 had passed an Act banning the 'multiplying of metals' as a crime against the Crown. Alchemy must have been rife in the Middle Ages to have attracted the attention of so many monarchs and popes.

Pernety, Antoine Joseph (1716–1801)

An elusive abbé who, having returned from his chaplaincy in the Falkland Isles, became librarian to Frederick the Great. He retired to Avignon, keeping a low profile during the French Revolution, while he researched avidly and gullibly into procuring the Philosopher's Stone. He compiled a *Dictionnaire Mytho-*

Hermétique and *Fables Egyptiennes et Greques Dévoilées*, in which he reduces all myth to alchemical interpretation. In his Dictionary Pernety lists 12 successive processes in the Great Work, which are represented by the 12 signs of the zodiac as follows:

- | | | |
|-------------------|---|-----------------------------|
| 1 Calcination | ♈ | Aries, the Ram |
| 2 Congelation | ♉ | Taurus, the Bull |
| 3 Fixation | ♊ | Gemini, the Twins |
| 4 Solution | ♋ | Cancer, the Crab |
| 5 Digestion | ♌ | Leo, the Lion |
| 6 Distillation | ♍ | Virgo, the Virgin |
| 7 Sublimation | ♎ | Libra, the Scales |
| 8 Separation | ♏ | Scorpio, the Scorpion |
| 9 Ceration | ♐ | Sagittarius, the Archer |
| 10 Fermentation | ♑ | Capricornus, the Goat |
| 11 Multiplication | ♒ | Aquarius, the Water-carrier |
| 12 Projection | ♓ | Pisces, the Fish |

A number of other alchemists divide the processes leading to the Philosopher's Stone into 12, for instance, Ripley, Mylius and Valentine. See also *Magnum Opus*.

Petraeus, Cornelius

A seventeenth-century philosopher from Hamburg, whose coat-of-arms is replete with alchemical symbolism. The shield, in the shape of a philosopher's egg, contains Mercury 'fixed' on his right side by a heavy weight and rising up, 'volatile', on his left side with the aid of little wings attached to his left ankle and wrist. Huge wings soar up above the crest over the



egg, enclosing the seven-pointed star of the seven planets and seven metals. *Sylva Philosophorum* (The Grove of the Philosophers) is Petraeus's book on alchemy.

Philo of Alexandria (20BC-AD50)

Jewish thinker, religious teacher and mystic, who had an enormous influence on spiritual alchemy. He inherited both the Jewish-Kabbalistic tradition of north Egypt and the Pythagorean-Platonic method of inquiry into divine reality. Most of his treatises are expositions on the Pentateuch, but with a strong sense of the mystic presence of God in the individual soul. The Scriptures are allegories of man's soul and the transformation it must undergo to experience God within, as opposed to God 'out there' in the ordinary world, which is rather 'a reflection of God's attributes, an image of Him'. Philo's method of soul-training was known as 'Askesis'.

Philo of Byblus

A first-century Phoenician who epitomized and translated into Greek some of the works of an ancient priest, Sanchuniaton, who, he claimed, lived long before the Trojan War. He found connections between Phoenician, Egyptian and Greek myths, from which stemmed masonic and alchemical rituals and allegories, such as the relationships between king/sun – son and the hermaphrodite/bisexual Mercury – Hermes. Hermes in early Phoenician times, no less than in both Greek and Egyptian myth, was regarded as a god and a sage-inventor. See also Hermaphrodite.

Philosopher's Stone

The Magnum Opus or Great Work of the alchemist was to find or make the Philosopher's Stone and then to use it as a transmuting agent or menstruum. Alchemical literature through the ages is littered with allegories of seekers of the Stone (from 40 days

and 40 nights to lifetimes), and endless laboratory accounts of Operations. There was no such thing as a control experiment. No account is consistent with any other, either in method or end product. The Stone can appear in myriad guise – as a powder or tincture, as a cube, as a flying boulder, as coral.

1) The Making of the Stone: the basic idea is to extract impurities from ordinary matter (*prima materia*) and reconstitute it in its perfect state. To complicate the issue, every thing has its own Stone, which is the peak or purified form of itself; but the Stone for making gold is the ultimate aim, and this is where writings become woolly, for few have achieved it, and adepts' lips are sealed.

2) 'The Using of the Stone': the Stone was used as a transmuting agent, whereby the 'potency' of the Stone could be 'multiplied' up to thousands of times in impure substances as, for instance, potentizing in homeopathy. For Paracelsus, this had enormous possibilities in medicine. Sick people could be transformed by tinctures and powders from the Stone that had been alchemically produced. See also Gold; Magnum Opus; Philosophic Mercury, Salt and Sulphur; Potency; Powder of Projection; Valentine.

Philosophic Mercury, Salt and Sulphur

In alchemy, these substances bore very little resemblance to the natural substances of those names! Rather, they were transmuted – if not imaginary – qualities attributed to substances (*prima materia* e.g. ordinary silver, ordinary gold and ordinary mercury) used for making the Stone after the grosser physical properties had been removed.

Broadly speaking, Philosophic Mercury stood for fusible/metallic/volatile properties (or silver, the feminine); Philosophic Sulphur for fiery/inflammable/volatile properties (gold, the masculine); and Philosophic Salt for non-flammable/fixed properties (the unifying principle).

Since earliest times it was believed that the



Philostratus

world of matter had divine origins. The ancient Greeks saw matter as made up of the four elements. Aristotle refined this theory, saying that these elements were arranged in pairs of opposites, fire and water, earth and air, which were specially powerful combinations; but they could mingle with each other, producing matter according to the mixture of elements that was within them. Air and water produced fusible metals from the vapours, while fire and earth produced 'earthy smoke', thence stones and minerals.

The eighth- to tenth-century Arabian alchemists refined this notion further: air-water combinations made up mercury, and fire-earth combinations made up sulphur. From these two stemmed all metals and minerals.

The medieval Latin alchemists embroidered still more on the sulphur-mercury theory. With their thirst for correspondences ('as above, so below'), to the seven metals they assigned the seven planets, while to mercury and sulphur they assigned man's spirit and soul. It was Paracelsus in the sixteenth century who added the idea of 'sal': 'Heaven and earth have been created out of nothingness, but they are composed of three things – mercurius, sulphur and sal'. Mercury is the 'essence', salt is the 'body' or 'ashes', and sulphur the 'oil' clinging to the mercury. Thus a fantastical Trinity was introduced into alchemical minds. In their experiments, the Arabians had already found that mercury and sulphur did not produce a metal, but cinnabar (mercuric sulphide), the red powder they endowed with magical properties in gold-making. So grew the notion of magical or 'philosophic' metals, with salt as the unifying principle. See also Cinnabar; Dew; Elements; Emerald Tablet; Prima Materia.

Philostratus (c. 170 – c. 245)

A biographer and proponent of early alchemical writings. His *Life of Apollonius of Tyana* emphasizes the mystic orientation of magi and philosophers. Philostratus defends Apollonius, the wandering Pythagorean mystic, against the

charge of sorcery made by a rival philosopher, Euphrates. Philostratus writes in detail about the link between Apollonius and the alchemist-magicians of Babylon and Susa and Indian Brahmins. He writes down various astrological, medicinal and alchemical practices of the Brahmins. Apollonius apparently had the power to cure the sick and revive the dead, and like great Prospero, could rule over demons, working miracles.

Throughout the Middle Ages, alchemists set much faith in Philostratus's biography and considered Apollonius the foremost and wisest magus.

Phlegma

Another of Paracelsus's descriptions of Philosophic Mercury:

The three principles from which all things are born and generated are: phlegma, fat and ash. The phlegma is Mercurius, the fat is Sulphur and the ash is Salt. For that which smokes and evaporates over the fire, in the burning of wood, is Mercury; that which flames and is burnt is Sulphur; and all ash is Salt.

See also Philosophic Mercury, Salt and Sulphur.

Phlogiston

A substance supposedly contained in all combustible bodies that escaped on burning, while the calx or ash remained. Alchemists about Georg Stahl, who invented the term phlogiston (Greek 'phlogizo', 'set on fire') in around 1700, held that if the phlogiston could be captured back into the calx, it would restore the original body, together with its 'soul'. Stahl and his predecessor Johann Becher had tried to adapt the alchemical theory about philosophical Sulphur to growing chemical knowledge in the seventeenth century. Becher had divided solids into three kinds of earth, one of which he classified 'terra pinguis', fatty

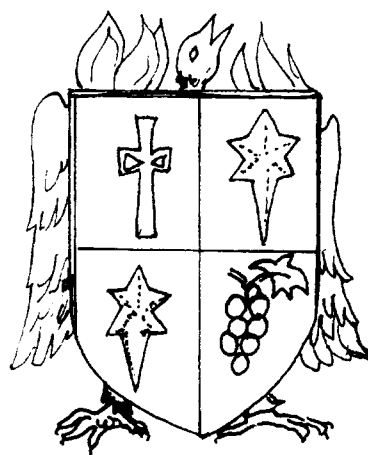


earth. This was like Paracelsus's Sulphur, the principle of alchemical inflammability.

Phoenix

The archetypal alchemical bird, rising from its ashes, that demonstrates the alchemical process of death and rebirth.

Jung describes his family crest as originally displaying a phoenix, representing 'Jung', 'young'. However, Jung's grandfather, a Grand Master of a Swiss Masonic Lodge, changed the arms to reflect masonic symbols: first quarter, a blue cross; second and third, a gold star; last quarter, a bunch of grapes. Jung himself interpreted these symbols rather elaborately as alchemical and Rosicrucian.



Jung's family crest

Phylactery

A small leather box containing Jewish texts on vellum, worn at morning prayer. However, the origin of the word (Greek for 'amulet') suggests a less orthodox use. Phylacteries may well have been carried by Alexandrian Jews to house Kabbalistic and magical Words of Power. John Spencer, the seventeenth-century Hebraist, compiled a fascinating work on Jewish laws and rituals, including a section on phylacteries, in which he implies pagan nature-magic sources.

Physic

Medicine; as applied to the medieval belief in the planetary influences on the human body, as well as the natural constitution of the body, with its fluxes and fluids or 'humours'. It was believed that an alchemical transformation took place between man and the specific illness he had, according to what aspects of the planets were involved. Doctors in some countries, notably France, could be deprived of their licences if they failed to carry an almanac showing the favourable days, according to astrological workings, for carrying out treatments.

Paracelsus said, 'Medicine rests upon four

pillars: philosophy, astrology, alchemy and ethics.' This ceaseless searcher for cures went on: 'The Physician must give heed to the region in which the patient lives, its earth and its stones.' He must also heed what is happening in the heavens, for the signs of the zodiac could be used for cures. 'When a medicine is found in accordance with the star, when hot is applied against hot, and cold against cold, all this accords with the arcanum.' See also Arcana; Planets; Poison; Zodiac.

Physika et Mystika

A work in seven parts, ascribed to the Greek philosopher Democritus (c. 460 – c. 370bc) and referred to by the alchemist Cosimus as *The Prescriptions or Recipes*. Two sections have 13 recipes between them for making gold, and another section has nine recipes for making asemon, a lustrous silvery alloy, the alchemical somata.

In the *Physika* can be recognized one of the main principles of Presocratic Greek physics: that there is some kind of material sub-stratum underlying all change. The *prima materia* was the usual explanation, identified with the four elements, but Democritus said that the sub-stratum consisted of indivisible particles with no characteristics other than size and shape. So colour, taste, smell and so on are the effects on our senses, not qualities inherent in the 'atoms'



Physiognomics

themselves. All this anticipates Plato's and Aristotle's doctrines about prime matter. See also Prima Materia.

Physiognomics

'The art of discovering what is within and hidden in man' said Paracelsus.

Physiognomics determines character from facial features and skull structure:

It tells us in what relation his heart stands to God and his neighbour ... That which fills the heart overflows in the mouth ... We should keep an eye on the outward characteristics which nature gives a man by shaping him in a certain way. For Nature shapes the anatomy of a pear in such a way that the pear develops into a pear tree; and she creates a medlar's anatomy in such a way that it develops into a medlar bush; and the same is true of silver and gold. Nature also forges man, now a gold man, now a silver man, now a figman, now a bean man.

Picatrix

A famous Latin version of a work on alchemy and magic composed in Spain. The original Arabic, *Ghayat al-hakim* (The Final Aim of the Philosopher), was attributed to one of a brilliant group of Spanish-Arab scholars in the caliphate of Al-Hakam II (tenth century), Maslama ibn Ahmad. A Spanish translation was ordered by Alfonso the Sage, King of Castille in 1256. The *Picatrix* became enormously popular in Renaissance magical circles, for it reflected, translation though it was, the talismanic alchemical lore that Maslama had encountered in his training in the Middle East with the secret brotherhood, the Brethren of Purity. See also Maslama ibn Ahmad; *Ghayat al-hakim*.

Pico della Mirandola (1463–94)

One of the greatest figures of the Italian

Renaissance, Pico merged Neoplatonism with alchemical cabala. He influenced the Borgias with his conviction that man could control his destiny. He was the first Christian (as opposed to Jewish) student of cabala and made a huge impression on Reuchlin who is better known for his alchemical/cabalistic forays. Pico was a brilliant 'comet of a season', and flashed 'across the horizon of Europe and passed too soon', but before his passing, he fitted in his treatise *De Auro*, in which he reports having witnessed a friend make alchemical gold and silver more than 60 times. He adds wryly: 'But the cost of producing the silver with a metallic water exceeded the value of the produce.' He does not divulge what happened in the experiments for gold.

Piezoelectric

The positive/negative effect of electric charges resulting from crystals being subjected to pressure; the transforming power of such crystals. See also Pyramids.

Pimander or Poimandres

A misnomer for one of two Hermetic bundles of texts that exercised a huge influence over Renaissance esoteric thought and spiritual alchemy. Of these two Greek sets of texts from antiquity, the *Esclepius* had survived in Latin translation, but the *Poimandres* had been lost and not found until Cosimo de Medici, the feverously intense patron of learning in fifteenth-century Italy, acquired a copy of the material from Macedonia and threw it at Marcilio Ficino, his most inspiring philosopher, to translate – forcing him to abandon even the Plato that he was in the throes of translating. This was in 1463. Ficino hurtled through the precious texts, thought to be the actual utterances of Hermes, hence far pre-dating Plato, and managed to translate all the 14 known tracts in the nick of time, before Cosimo died the following year, 1464. Ficino labelled these revered sources of revealed wisdom the



Pimander (The Shepherd of Men).

The *Pimander* is a dream-allegory of creation, similar to Genesis or the beginning of St John's Gospel. Pimander, the Good Shepherd, appears to Hermes (alias Thoth, the Egyptian god of Sacred Letters/Logos/Word of Creation) and introduces himself as the Nous, Supreme Knowledge, and asks Hermes what he most wants to know. Hermes, dazed by this overwhelming vision, asks to know himself, and god. Through the 14 books thenceforward, Pimander proceeds to show how Hermes can transcend the worlds of duality, and merge with God.

Piscean Age



Bishop-fish, the epitome of Christian piety. Yet even here are hints of the lechery that could not be quenched with holy water.

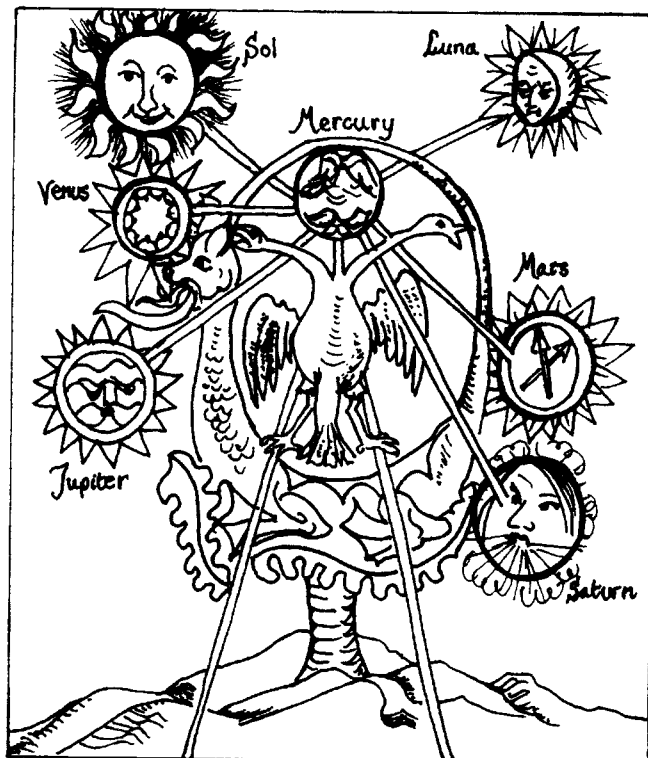
Stretches from the birth of Christ to AD2000 and forms part of the Great Year, which is 24,000–25,000 of our ordinary years. Alchemically, the Piscean Age governs distillation; purification through water, alcohol, dew. Its priests are Christian monks, Rosicrucians, cabalists. In the preceding Arian Age of ram-worship (as in Luxor, Egypt), initiation had been associated with Priests of Fire, and alchemy with hot metal ores, sulphur and calcination.

Planets

Traditionally seven in number, the planets not only corresponded to the seven days of the week, but also to the seven metals, to the seven major organs of the human body, to the seven major glands or chakram and to the seven main alchemical stages of the Great Work.

'Just as the sun shines through a glass – as though divested of body and substance – so the stars penetrate one another in the body ... For the sun and the moon and all planets, as well

Alchemistic diagram of Mercury as one of the planets that is the source of transmutation.





Plato

as all the stars and the whole chaos, are in man.' So said the visionary Paracelsus. To the alchemist, there was no area of life in which the planets were not involved. These 'babblers' of the sky, wayward 'vagabonds' – as the early Greeks saw them – were beings in their own right, and participated at every level of the workings of man and nature. See also Galen; Physic; Tattwic Tides.

Plato (427–348BC)

One of the greatest philosophers of all time. Plato lived in Athens, and founded his Academy there. He is thought to have visited the esoteric schools of the Pythagoreans in Egypt and studied esoteric arts. He did not think as highly of the written word as the spoken, so his writings, mostly in dialogue form, reflect the oral tradition of his lectures and were never intended to be revered. He was a major influence on Christianity via St Augustine and the Neoplatonists, thence the Arabian alchemists and Latin thinkers of the early Middle Ages (like Alain de Lille and Adelard of Bath), before Aristotle seized the European imagination in the thirteenth century.

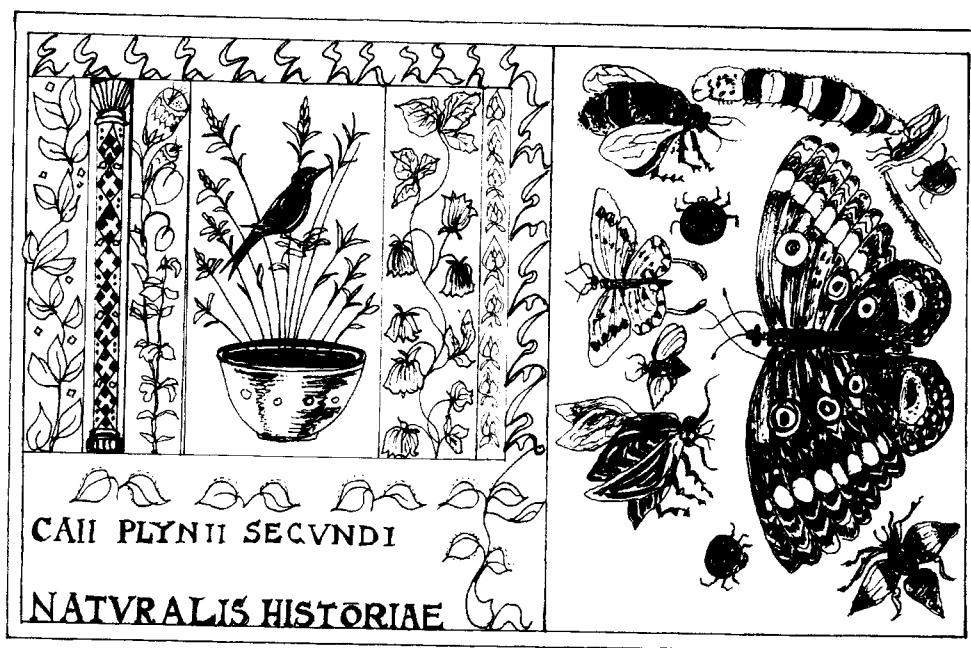
In the generations succeeding Plato, it was not his *Laws* or *Republic* that gripped the mind, but his *Timaeus* and *Phaedrus*, conveying Plato's theory of Ideas that exist in the eternal world beyond the visible. Moreover, *Timaeus* shows a remarkably modern understanding of physical probability in this world, compared with eternal certainty in the world of sacred principles. Whole schools of commentators grew up around Plato's philosophy, Christianizing it or adding structure to it like scaffolding, so the original became obscured, and Neoplatonism developed. By the Middle Ages, Plato had been sieved through the Nestorians and the Arabians, and the Jewish thinkers, and got mixed up with magic and fancy; so the medieval alchemists got him rather second-hand. This did not deter them, however, from seeking the Platonic world of the Eternal, beyond change.

Pliny the Elder (AD23–79)

Born on Lake Como, a Latin historian of extraordinary industry. Apart from his 21 books on the German wars and 31 books on recent Roman history, his greatest work is the *Naturalis Historia* in 37 books – an amazing mixture of fact and fantasy about the universe, the elements, magic, medicaments, physiology of man, minerology, alchemical use of minerals in medicine and the deity and 'Spirit of the Universe'.

In his work, Pliny claims that magic developed from medicine. In Rome magical practices were common in the cure of sickness. Some animals have particular magic power: the dragon, the serpent, the basilisk, all of which are alchemical symbols. Pliny discusses the apotropaic powers of plants to avert evil, like the mistletoe, and the alchemical properties of precious stones and minerals. He notes the parts of the human body that can be used in alchemy – saliva and the humours, black and yellow bile, phlegm and blood. Sickness can be magically transferred from men to animals, he says, by means of amulets.

All these beliefs and practices reflect the decadence of the Roman Empire, where people desperately clutch at straws and their reason gives way to Egyptian magic, alchemy and astrology. The fact that the Emperor Diocletian burned the books of Egyptian alchemists means that they must have been a considerable threat to his authority. Underground alchemical writings like the *Corpus Hermeticum* and books on magic were avidly studied by magicians and soothsayers. Pliny's view is that alchemy stems directly from astrological theory, whereby planets and their laws rule the universe. Life is but a reflection of astral phenomena. Correlations exist between planets and metals (Sun and gold; Mars and iron; Saturn and lead; Moon and silver) and every star has its own colour. The creative power of gold is due to the spots on the sun, just as the 'aureus sol' (the sun's yellow-red colour) corresponds to the colour of gold. Mars, which Pliny calls



From a design for
Pliny's *Natural History*
(Venice, 1472).

'igneus', recalls the colour of blood and iron and signifies war, while Venus's bluish tint reflects the colour of copper salts, cuprum, from the Isle of Cyprus (sacred to Venus).

Plotinus (c. AD205–270)

The greatest Neoplatonic interpreter of Plato's vision of the True, the Beautiful and the Good. His works were edited by his pupil Porphyry and absorbed by Jewish and Arabian alchemist-physicians such as Isaac of Kairouan and Avicenna in the ninth and tenth centuries.

Plotinus was a mystic; his works are, however, extremely intellectual. He constructs a 'cleaned up' Plato – a logical system of the universe, working up from matter to soul, from soul to reason, and from reason to God, the final abstraction beyond matter, pure existence. On the human level, Plotinus saw a Trinity: man has a spirit, a soul and a body. On the cosmic level, everything can move up or down the ladder of being, alchemically raising or lowering vibrations through varying degrees of fineness or grossness. See also Chakra; Tattwic Tides.

Pneuma

The spirit or Breath of God (in Greek and Coptic magical texts).

Poison

'Medicines are our poisons and poisons our medicines. Even the New Testament can be poison.' Thus spake Paracelsus, precursor of homeopaths. 'He who despises poison does not know what is hidden in it,' he observes. 'In all things there is a poison, and there is nothing without a poison. It depends only upon the dose whether a poison is a poison or not.'

The study of toxicology and antitoxics was the subject of many Arabian pharmacologists and alchemists. Ibn Wahshiyya wrote a *Book of Poisons* in the tenth century and pretended it had come through from the ancient Babylonians. The danger was that an alchemist could get a bad name if he were suspected of using poisons for criminal ends. Even the *Picatrix* had some quite explicit poison-recipes. See also Ghayat al-hakim; Ibn Wahshiyya; *Picatrix*.



Polygraphice

Polygraphice

A popular seventeenth-century work by W. Salmon, which analyses alchemy in the light of the new discoveries about the quantifiable nature of substances (for instance, mercury had been found to have a density $13\frac{1}{2}$ times that of water, and air had been found to have a finite weight). The *Polygraphice* states factually that 'Alchymie is an Arabick word, and signifies the Transmutation of Metals Semi-Metals, and Minerals'. The semi-metals are defined as antimony, cinnabar, tin-glass and zinc.

Pope John XXII (reigned 1316–34)

The wispy-like Avignon Pope (born Jacques Duese), who left behind him a legend, a Bull and an apocryphal book. The legend was that he amassed a fortune of 25 million francs, minted alchemically. The Bull was his *Spondent Pariter* of 1317, which forbade the science of alchemy, condemned alchemists to exile and imposed heavy fines on any defrauders who were profiteering by transmutation. The apocryphal book on the transmutation of metals, *L'Elixir des Philosophes, ou l'Art Transmutatoire des Métaux*, was attributed to this pope, albeit 200 years late.

Porphyry (c. 234 – c. 305)

The Neoplatonist pupil and editor of Plotinus and master of Iamblichus. Porphyry, a Phoenician born in Tyre, moved to Rome to study under Plotinus. He not only codified and edited Plotinus's works into six books of nine chapters each (hence their title, *Enneads*) but he wrote his own interpretation of the Platonic Soul, and the One beyond Existence. His *On the Pythagorean Life*, his commentaries on Aristotle's *Physics* and his tracts *On Harmonics*, *On Numbers*, *On Oracles*, *On Incorporeals* still survive. What appealed to later philosophers and spiritual alchemists was the way Porphyry advocated the path of

purification through the mind: the life of inner self-sufficiency that allows complete altruism.

Potency

The power and efficacy of the transmuting agent (the Stone or the Tincture, used in the remedy) in Paracelsus's form of alchemical medicine. The Tincture would be extracted from a plant, and through a series of Operations involving dilution, its mass was reduced while at the same time the energy was increased, to the point where in the end there was no physical matter left. What the alchemist-healer was working with was non-chemically-classifiable 'potency'. See also Homeopathy.

Powder of projection

The alchemically produced powder (that is, one form of the Stone) that is cast ('projected') into a crucible containing a metal, in order to effect its transmutation.

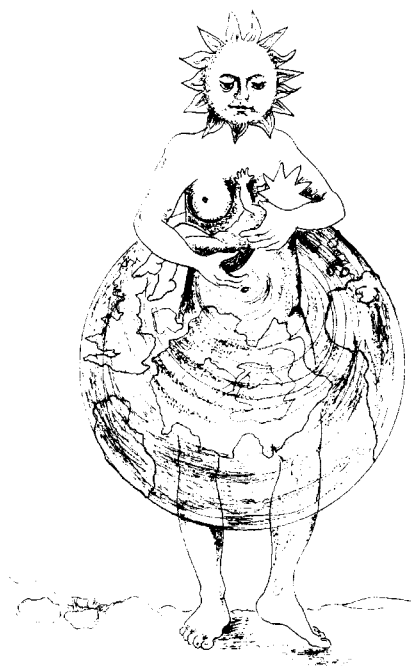
One of the theories about metals was that, like everything else in this world of sin, they were continually striving to better themselves from base metals into more refined ones and that alchemy could hasten the process. See also Valentine.

Prima materia

Prime matter, chaos or unpurified material, before the start of the alchemical Operation. Most of the alchemical theories about prime matter stem one way or another from the pre-Socratic Greek ideas about creation. Thales, Anaximander and Anaximenes, the Old Colonials from Asia Minor, drew their conclusions on created matter and the elements from their eye-witness knowledge of floods and swamps, storms and mists that men had to struggle with in Babylonia and Egypt.

Alchemists themselves are deliberately obscure in their definitions of *prima materia*. They give clues for only the most dedicated pilgrims of the Great Work. Although no two

accounts are identical, it can be deduced that alchemists often used ordinary gold, ordinary silver and ordinary mercury because these metallic minerals were among the most promising to work on *vis-à-vis* their generative, and transformative properties. Gold would be purified by antimony, silver by cupellation and mercurial salts by distillation. Then they would all be ready for the next stage of the Operation in the Hermetic vase or egg.



Prima materia. The Earth is nurse of the Stone. Themes in Maier, Mylius and Stolcius.

Proclus (c. 410–485)

A late Neoplatonist who commented on Plato's *Timaeus* and on Euclid's *Geometry*. Proclus dwells more than earlier Platonists on the magical. The world of the soul is surrounded by angels, daemons and music. Proclus's mathematical world is a Pythagorean world of Sacred Geometry and cosmic proportion. It was these ideas that influenced Renaissance thinkers and occultists such as John Dee. See also Dee; Plato; Pythagoras; Timaeus.

Pselcis

In the temple at Pselcis, a hieroglyph, c. 250BC, depicts Hermes Trismegistus holding an ankh in one hand and, in the other, a staff with a serpent, a scorpion, a hawk's head and an asp enclosing a circle.

Psellus (1018 – c. 1078)

A Neoplatonist of the eleventh-century Byzantine Empire and a leading authority on magic and alchemy. His gloss on the Hermetic text *Poimandres* confirms that all the Greek concepts of God came from the East. Psellus justifies the superiority of the East over Greek philosophy by confirming that Porphry had gone to an Egyptian priest, Anebon, to be initiated into the First Cause.

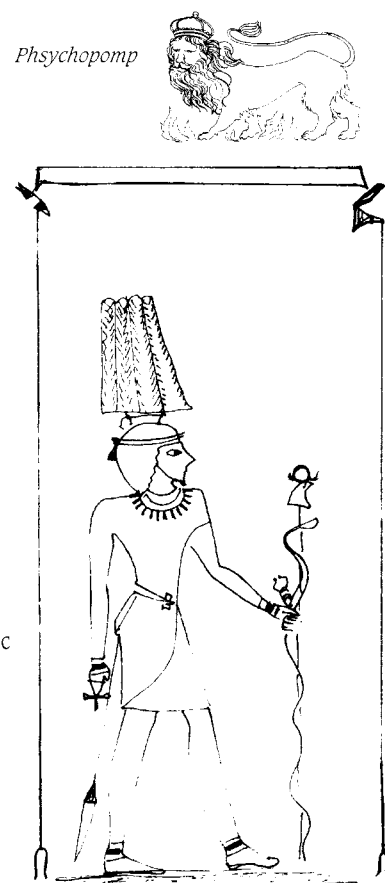
Psellus's writings survived the turbulence of the Byzantine Empire's last 400 years and were rediscovered by Italian scholars in the fifteenth century. It may well have been that Psellus's commentary on the *Poimandres* was known to Cosimo de Medici and Ficino and helped the latter in his task of translation.

Pseudepigraphia

The whole body of writings that are ascribed to, as opposed to really written by, an author. The annals of alchemy are strewn with such works. Even genuine authors sometimes pretended they hadn't written this or that work, secrecy and fear of persecution being the most likely reasons.

Psychopomp

Hermes was the original psychopomp, the conductor of the souls of the dead to Hades. In alchemical allegory, it is the spiritual guide,



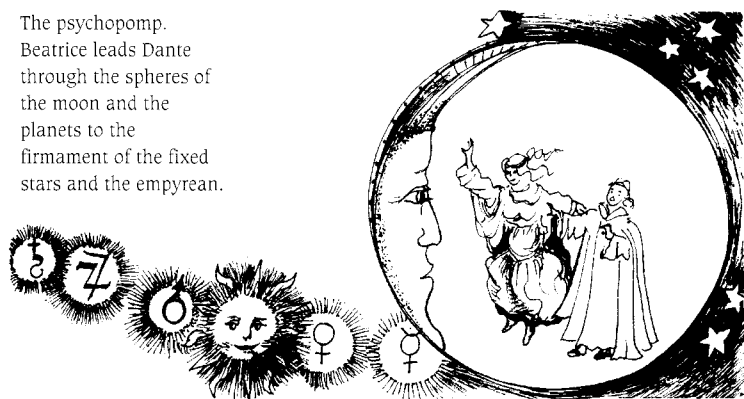
Hieroglyph of Hermes Trismegistus c. 250BC.



Ptah

who usually appears to the seeker in a dream, and leads him on his journey – as Beatrice leads Dante, Polia leads Poliphilus, and Thalia leads Thomas Vaughan in his *Lumen de Lumine*.

The psychopomp. Beatrice leads Dante through the spheres of the moon and the planets to the firmament of the fixed stars and the empyrean.



Ptah

According to Zosimos this god was revered as patron of alchemists and had furnaces in his temple at Memphis. In Egyptian religion, Ptah was the cosmic architect. His job was to give form to the words of Ra (God the Creator) as spoken by Thoth (Hermes). He often stands on a plinth in the form of the glyph for Ma-at, cosmic law, divine harmony. See also Horapollo; Thoth.

Puffers

Amateur alchemists and quacks, so called because of their frantic use of the bellows. For the main first stage of the alchemical Operation, calcination, all kinds of furnaces were used, and all kinds of 'magical' fuels – oil, wax, pitch, peat, hair, bones, even camel-dung. The ever-hopeful puffer thought that the more he worked at the bellows, the greater the heat would be and the quicker the transmutation.



A puffer

Pumpkin

The alchemical egg, womb or incubator. The shadowy Catalan alchemist, Arnold Villanova,

reportedly shipwrecked in 1313, is said to have put strange drugs into a pumpkin in the hope of creating a homunculus. Cinderella's fairy godmother really effected an alchemical transformation with her pumpkin; and in Tula, the Toltec city of alchemical craftsmen, everything was larger than life, including 'ears of corn and pumpkins that reached the size of man'. See also Homunculus; Villanova.

Pyramids

Just as the name 'Egypt' was 'Alkemi,' the 'black earth' of alchemy, so the pyramids were the physical representation of that 'black earth', whether the sand-dunes or the pyramid-shaped rock-formations at Abu Simbel. The alchemical signs for the four elements are all pyramids, $\Delta \nabla \nabla \Delta$, which become dynamic in the actual man-built pyramids of Egypt (i.e. they do not remain static like a triangle). The dynamic force of pyramids was used for priestly initiation and transformation of states of being in early Egyptian cults. In later times, Pythagoras and Plato codified and described the special powers of pyramids in terms of mathematics – Platonic solids – and cosmologies. The tetrahedron, the first of the Platonic solids, is a pyramid. These solids were archetypal principles behind the created world.

In alchemical literature the ideas of Pythagoras and Plato came through the Neoplatonists to Renaissance Italy. Not only are books on architecture and human anatomy based on 'the golden proportion', but so are books on astronomy and occult magic. Stars and pyramids appear on cabalistic diagrams. The symbol of the *Zohar* ('brightness', 'splendour') is a pyramid and its shadow. The Seven Wonders of the World were regarded as sublime commentaries on the pyramids, with their square bases grounded in 'Nature', their sides soaring up to metaphysical Unity. The tomb of Mausolus at Halicarnassus was a pyramid with a circular precinct; on the top of the pyramid was carved a chariot with four horses, harnessed to a form of cross.



All these Wonders from antiquity were mixed up in medieval thought with magic and Christianity and alchemy. The pyramid turns up as the Golden Tripod upon which stands the Hermetic vase that incubates the precious Stone in the Great Work.

Finally, the most dazzling 'Egyptian' book in the late alchemical tradition is the *Oedipus Aegyptiacus* of Athanasius Kircher, with its commentaries on Pythagorean and Orphic mysteries, hieroglyphics, harmonics and pyramids, and pyramid-shadows as vibrations of sound or light. He even compares the Mexican pyramids with the Egyptian ones, as proof of a sacred 'sun-worship' connection. Kircher's mind was like his real museum, a mausoleum entombing monumental relics.

Pyrotechnic art

Transformation by fire or by alchemy.

Pythagoras (c. 580 – c. 500Bc)

A mystical philosopher, mathematician and founder of an esoteric school; more of a concept than a person, so misty are his origins. On the *Pythagorean Life* by Porphyry, the Neoplatonist, sums up best the many tales that grew around Pythagoras: he believed that the soul was immortal and that it came back many times into bodies of plants and animals; that life was cyclical; that God was supreme music; that His Word was Number manifest as Form; that the experience of life in a finite, limited body was the purpose of discovering supernatural existence within the finite. Pythagoras saw the relationship between number and cosmic realities – especially in the simple paradox that a half produces a double: a cell divides into two. Hence his particular obsession with the square, its root (or side of

the square) and its diagonal and his formulations on the square roots of 2, of 3 and of 5, which led in later ages to the building of the transformational Gothic cathedrals.

What seized the medieval alchemical mind most was, on the one hand, the contemplative lifestyle of the Pythagorean school, with its overtones of Egyptian secret rituals and, on the other, the Sacred Geometry that included the five Platonic Solids from which God created the volume of forms in the universe. These five are: the tetrahedron, the octahedron, the cube, the icosahedron and the dodecahedron. All of these shapes crop up again and again in alchemical emblems and in sacred architecture.

Pythagoras, after a decoration on the title page of Orontius's *The Astrolabe Quadrant* (Paris, 1534).





Qabalah

Or Kabbalah, the specific form of Jewish mysticism that grew up in Languedoc, southern France, in the twelfth century, as opposed to the Christianized cabala. Qabalah in this spelling relates directly to the magical root letters Q-B-L, the 'received tradition' of Israel, revealed by God to select saints and prophets in Babylonia.

Indirectly, Qabalah or Kabbalah links with the word 'Qiblah' in Aramaic meaning 'amulet'. According to A.E. Waite, the third of the four main branches of Kabbalah is Theurgy and the talismanic use of Divine Names. It was thought that words held power, particularly the 'Word of God', the Logos. Letters were potencies, energies, entities with a life of their own. In Qabalah, the 22 Hebrew letters were used in invocations to angelic beings and meditations. This sort of divine performance with letters was turned into an Art, 'Ars Combinandi', and dates back to the *Sepher Yetzirah* (the Book of Creation) and Geonic Jewry.

The ability to create entities that would materialize through the invocation of certain magical combinations of letters seized alchemical magi with Faustian visions ('solemn follies', Waite called them). Azriel of Gerona, the thirteenth-century Kabbalist, describes the language mysticism of the 'Gabalah' as having five processes, which lead to Gnosis or perception of God:

- 1 Tiqqun: the letters are placed in harmony;
- 2 Ma'amar: the letters are assembled into words;
- 3 Seruf: the letters are permuted;
- 4 Mikhlal: the letters are collected together in all their combinations;
- 5 Heshbon: the letters are calculated according to their numerical value.

The way this 'Ars Combinandi' worked can be only crudely illustrated in English. Because Hebrew is a consonantal language, built up in root-groups of three, there are seemingly endless ways of combining the consonants to represent God's infinity. Thus, the three root-consonants of Qabalah, Q-B-L, transliterated into English, might give us:

- QBL: cabal, cable, quibble, Kabul, Keeble, key blow, cub ill, coy bull, cow bellow, cow below, queue below, cobble;
- QLB: Caleb, calibre, club, clob(ber), all by, key alibi;
- BLQ: ball-queue, be low-key, bell key, black, baulk, bulk, block, bullock, be alike, be like;
- BQL: buckle, buck low, be cool, buy coal, bow-keel, back all, obey a call;
- LQB: Lockerbie, Loch Kerby, look by, likeab(le), low kerb;
- LBQ: lie back, low back, law book, le bike, el bok, low-ebb quay.

By invoking these words magically, their significance would be collectively powerful. While all this Qabalistic balancing with anagrams was not synonymous with alchemy, it nevertheless conjoined vast rambling edifices of alchemical-cabalistic literature that were created, Gormenghast-like, from sephirotic trees, magical symbols and Enochian alphabets, by the Groaning Tituses: Lull, Cornelius Agrippa and Dee. See also Cabala; Geonic; Kabbalah; Theurgy.

al-Qazwini

Two compilers, with the same name, of alchemico-scientific compendia of the Islamic sciences. The first al-Qazwini, Zakariyya (d. 1283) worked in the fields of botany, zoology and Minerology, with an extraordinary mix of fable (as in a bestiary) angelology and demonology, which fitted in alongside his scientific analysis of world structure. It was the last section of his work, Minerology, that

prompted alchemical exegesis, as for instance Alfonso X's *Lapidario*, and *The Book of Stones, Magical Use of*.

The second al-Qazwini, Hamd Allah Mustawfi (fourteenth century) expanded on the first al-Qazwini, writing in Persian and becoming a source of inspiration for Latin clerics in the Middle Ages, including Vincent of Beauvais. See also *Quadruplex*.

Qlipoth

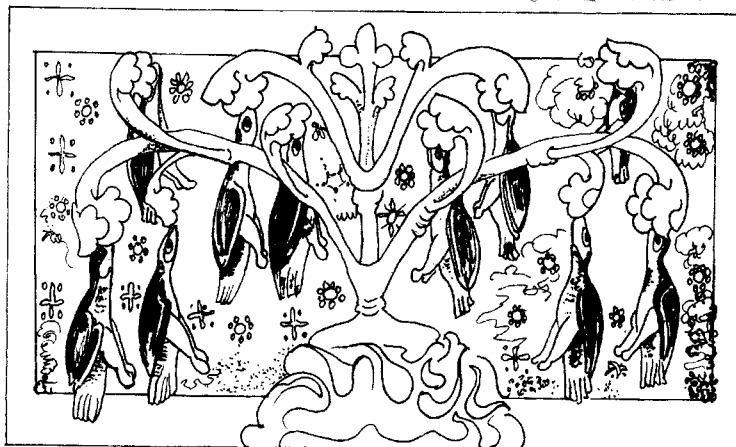
The discarded 'shells' of the world in the making caused by sin, Eve's fault. In Kabbalah, it was the evil and adverse spheres or worlds that are composed of the filth, which was expelled from the Tree of Life when it emanated from the unmanifest at the creation.

The law of Hermes Trismegistus stated the greater the front the greater the back. So in alchemy, the qlipoth were the dark sides of alchemy, in which compilers of grimoires, pseudo-chemists, witch-hunters and some popes dabbled.



A qlipoth demon, typical of the dark side of alchemy illustrated in grimoires.

Quadruplex



Quack

Two-a-penny among alchemists – a charlatan doctor who offered wonderful remedies. See also *Puffers*.

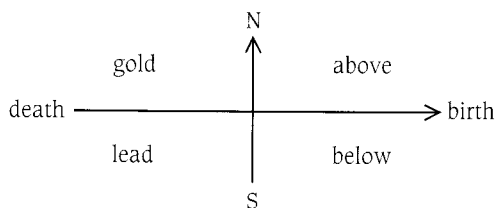
Barnacle geese, which were supposed to grow on trees, were incorporated into the cosmology of Zakariyya al-Qazwini.



An itinerant quack.

Quadruplex

'Fourfold' or 'divided into four', as in Vincent of Beauvais's *Speculum Quadruplex* (The Fourfold Mirror – i.e. the cosmos, which reflects the microcosm in the macrocosm). The four directions, north, south, east and west, work vertically as well as horizontally.





Quantum healing

They symbolize alchemically:

- 1 Transformation: vertically from lead to gold, from below to above; and horizontally from east to west, from death, setting sun, to birth, resurrection and sunrise.
- 2 Gold: that which is transformed.
- 3 Man: from the static Christ-on-the-sacrificial cross + , to the dynamic resurrected man, humanist, zodiacal x.

As Paracelsus says in his *Paragranum*:

Just as in heaven there is a Saturn of fiery nature so on Earth there is one of earthly nature, and just as there is a Sun in the water, so is there one in heaven. In man each thing is fourfold, what lies in the remotest corner of the earth, casts its shadow on man and man is suffused with what lies in the depth of the sea ... What is the difference between the Sun, Moon, Mercury, Saturn and Jupiter in heaven, and the same planets in man? The difference is only one of form. That is why there are not four arcana but only one arcanum; however, it has four aspects, just as a tower has four sides, according to the four winds.

So man participates in the four elements in differing proportions. Paracelsus believed that water and earth formed the elemental body of man, and fire and air the 'starry' body. See also Elements.

Quantum healing

A term coined by Deepak Chopra, in his book of the same name, to describe the jump to a new level of consciousness that prevents illness continuing. It has much in common with faith healing and spontaneous remissions; a mind-over-body transformational process, an alchemical leap, whereby a person is cured of the incurable.

Quantum physics

In physics, the quantum is a building-block

that cannot be broken down into anything smaller, in which waves may be emitted or absorbed. It works with ultra high speed accelerators.

Curiously, modern physics is hi-tech, whereas modern medicine is not. Quantum physics, as opposed to the old mechanistic physics, is widely accepted as the 'uncertainty' theory of intrinsic spontaneity at microscopic level. Nature is essentially chaotic, so inherently unpredictable.

Modern medicine has not taken such a leap. The only hi-tech apparatus here is human consciousness: the inner alchemy.

Quartan Fever

A fever recurring every third day (by inclusive reckoning, fourth). Mentioned by the alchemist Basil Valentine, for which fever the monkly herbalist had alchemical remedies, potions carefully prepared according to the positions of the planets and administered to patients in conjunction with blood-letting, at times astrologically determined. Ficino confesses to have suffered from this fever.

Quetta Valley

The site of mystical cults in prehistoric north India. There is evidence in Harappan seal-writing and marks on pots that these ancient potters used the transformational powers in mandalas and sacred geometry.

Quetzalcoatl

Derived from 'quetzal' = fantastically plumed bird and 'coatl' = serpent. The feathered serpent, a culture-hero of the Toltecs, whose mother underwent an alchemical conception when she swallowed a piece of jade years after her husband's death. One of Quetzalcoatl's names is Priest of the Stone; his symbols are two stones, painted serpents on temple façades as caryatids ('coatl', a snake resembling a caduceus).



Quetzalcoatl doing penance by drawing his own blood – a priestly activity. Emblems associated with Quetzalcoatl are the conical hat, the feather device on his back, the curved stick and the conch shell at his foot.

Quicksilver

Associated with Philosophic Salt in the first stages of the alchemical Operation, quicksilver was known to the ancient Greeks as 'liquid silver' or 'silver water' and to Pliny as 'hydrargyrum', the origin of its chemical symbol Hg. Often confused with its counterpart Philosophic Mercury, common quicksilver is the Flying Slave, and as such this *ignis fatuus* has led many a quacksalver into the mire.

Quimby, Phineas Parkhurst (1802–66)

The teacher of Mary Baker Eddy, the American founder of the Christian Scientists, Quimby was a clock-maker by trade. He believed that everyone possesses healing powers, as they do dowsing powers. He demonstrated remedies that worked even though they were preposterous. He was convinced that the power of the mind could project onto the diseased organ, working a type of alchemical transformation.

Quincunx

Derived from 'quinque' = 5 and 'uncia' = a twelfth: five-twelfths. A quincunx is an arrangement of five figures within a square or rectangle, thus:



One at each corner and the fifth in the centre, as on a die or in a pack of cards.

Historically, it has infused the worlds of nature, man and the stars, although its significance is no longer noted. Alchemically, its 'whole' is more than the sum of its parts.

In Elizabethan times, the quincunx was part of the traditional layout of a garden, with five trees on a lawn, or at the corners and centre of a maze. Those great masonic exponents of gardens and their cosmic relationships, Francis Bacon and Sir Thomas Browne, mused on the quincuncial shapes of reticulate plants, in the Hanging Gardens of Babylon.

In the mineral world, the quincunx occurs in the formation of metals, in occult atomic structures, while architecture is founded on 'five' says Browne, naming Vitruvius and Alberti. Cathedrals, churches, pyramids, mausolea, labyrinths and mandalas, all the great sacred spaces, take on the cosmic significance of the Hyades, the 'quincunx of heaven'.

Man can cross from 4 to 5: from his nature containing the four levels of physical matter – stone, plant, animal, man – to transcended man, God-in-man.

This transforming from a thing's four-ness to its five-ness is cabalistic alchemy. There was a magical significance in the ratio 5:12 – five was the number of regeneration and, in the zodiac, Venus, the silver planet, was in the constellation of the Hyades, the five, the quincunx.

Quinta Essentia

The quintessence, fifth element or Philosopher's Stone. Several alchemists have



Quintal



Alchemy, after a woodcut in Thurneysser's *Quinta Essentia* (Leipzig, 1574).

written books of this title, including Thurneysser, Rupiscissa and Cornelius Drebbel.

Quintal

A unit of weight equalling 100 kilogrammes. The notorious Pope John XXII, in his book *Ars Transmutatoria*, boasted of working on the Philosopher's Stone and of creating 200 bars of alchemical gold, each weighing one quintal. Astoundingly, after his death, 25 million gold florins were found in the papal treasury. This was quite unaccountable, for ecclesiastical conflicts between Avignon and the Vatican whittled away papal fortunes.

Quintessence

The fifth essence or element, born of the other four – earth, water, fire, air – leading man higher up the gamut of 'vibrations'. Hamlet knew it: 'What is this quintessence of dust?' So did Paracelsus: 'The quinta essentia can cleanse a man's life ... Therefore each disease requires its own quinta essentia.'

Cornelius Agrippa saw the quintessence as the 'medium whereby Celestiall Souls are joyned to gross bodies' and that bestows upon them 'wonderfull gifts'.

In terms of the Platonic solids of Pythagoras, quintessence was associated with the dodecahedron.



Rabelais (c. 1490–1553)

A renegade Benedictine friar and the author of *Pantagruel*, who, like his Swiss contemporary, Paracelsus, 'thwacks at quacks'. This roaring buffoon, Hellenist, scholar, lapsed curate, physician, alchemist and picaresque inventor of Gargantua, is master of the 'perhaps' rather than the 'certainly so', of the 'probable' of the *Timaeus*, the 'approximation' of the *Upanishads*, the quantum leap of modern physics, the inspired jump. With gusto, he mingles dross with triple-refined gold. He writes in puns, the goetic language beloved of alchemists. This 'langue goétique', alchemical argot, is largely lost in the English translation by Urquhart, brilliant though that is.

Rabelais' masonic manner is known as blazoning. Even the name 'Gargantua', blazoned abroad, is in alchemical code: Gar (stone), gant (great), Tua (one of the Tua tribe) – i.e. Son of the Giant Stone. The spirit of Gargantua is caught in the modern *Asterix* books, where Obelix is a latter-day Gargantua, a mover of menhirs, of giant stones.

Behind this guise, Rabelais' humorous if savage pen scratches and digs at Doctors of Learning – at the Sorbonne, or wherever pedants lurk – 'striking athwart and alongst', like his character Friar John of the Frails. Real knowledge is hidden. The 'vie horrifique' of Gargantua hides its paradoxical opposite, the 'vie aurifique', the life of gold-making.

Rabelais was apparently inspired by a very different writer of alchemical dreams: Francesco Colonna, who narrated the *Dream of Poliphilus*. In turn, Rabelais had Jonathan Swift under the spell of his magical nonsense, his 'calembours lanternois'. Fittingly, alchemically, Rabelais disappears suddenly and for ever in 1553. Hidden in his dunghill of a work is the jewel. See also Urquhart.



Radical gold

Aurum radex. Just as 'aurum potabile' was the gold potion, the liquid gold elixir, so radical gold, root-gold, was gold in its raw state, mined gold, the first stage before the alchemical Operation.

Ram's skin

A fanciful kenning for vellum. The Ram was the Golden Ram of Greek myth; his skin, the Golden Fleece which, by devious journeys through the ages, came to be associated with

Title-page from Rabelais' *Pantagruel* (1532). Rabelais' name is written as the anagram Alcofrybas Nasier.



Rational soul

the 'skin' or 'parchment' upon which magical, alchemical spells were written – even the *Leyden Papyrus*. The *Suidas Encyclopaedia* held that the Golden Fleece of the Argonauts was a papyrus holding the secrets of gold-making. Pernety links the Golden Fleece with the sacred vellum of alchemical scripts, just as he links the first stage of the Magnum Opus with calcination, represented by Aries the Ram.

Rational soul

In medieval alchemy, the 'vegetative soul' was assigned to plants, the 'sensitive soul' to animals and the 'rational soul' to human beings. Through 'angel magic', the process of summoning non-physical higher beings, it was thought possible for human adepts to reach the 'angelic soul'.

This philosophy was familiar to all alchemist-thinkers from Aristotle onwards, through Isaac, Avicenna, Rhazes and St Augustine, to Albertus Magnus. Even Shakespeare has 'rational mind' as the distinguishing mark between man and the animals, 'who want discourse of reason'.

It ties in with the theories on 'degree' and hierarchy, that everything in the universe has its proper place in the order of being. See also Isaac of Kairouan.

Raven king

In alchemy, the nigredo (melanosis) stage of the Magnum Opus, personified as the black carrion king of decomposition and death.

Edward Kelley's *Theatre of Terrestrial Astronomy*, Chapter the Tenth is headed: 'Of the Blackness of Raven's Head by means of which the copulation of Sun and Moon takes place.'

In this chapter are described the stages of putrefaction, designated by their black colour and fetid smell. Putrefaction must do its work before the body can be joined to the soul: 'For solution and putrefaction begin with a fetid



The raven, symbol of alchemical death (nigredo or melanosis).

smell, and the process gradually develops, and therefore the Raven's Head is called a deadly poison. The odour is rather intellectually than sensuously perceptible. The blackness must precede whiteness.'

And again: 'The beginning of our work is the Black Raven which like all things that are to grow and receive life must first putrefy.'

The raven was the taboo bird in all cults. Three Raven Kings were associated with the bird's transforming powers of death, decay and terror. The first was Odin the Norse God who had two raven prophet-messengers (winged black mercuries), Huginn and Munin. The second was King Arthur, who in Wales and Cornwall was believed to inhabit the raven's body, while his half-sister Morgan le Faye was the Raven Queen Morrigan, a death-goddess who took the form of a raven. The third king particularly connected with the raven was Bran the Blessed, the Irish cult-hero, whose very name 'Bran' means 'raven'. Bran was also connected with Saturn, the 'black' planet, which symbolized alchemical lead. Mythologically, Bran and Saturn were both eaters of flesh.

According to some ancient Greek traditions,

another associate of the raven was Esclepius, King of the Thessalian crow-totem tribe of Lapiths. He, like Bran, was a patron of healing and resurrection. This is a variation of the caduceus theme. See also Iosis.

Rebis

Meaning 'thing-two'. The hermaphrodite, called by Paracelsus the 'bisexual creature, which transmutes silver and other metals into gold ... It transforms the body, removing its harmful parts, its crudity, its incompleteness.'

Reipublicae Christianopolitanae Descriptio (1619)

A Utopian book by the Rosicrucian, Johann Valentin Andreae.

Retort

A glass vessel consisting of a large bulb with a long neck narrowing at the end, which is used in alchemical reactions, especially distillation. Sometimes the vessel was used for heating mercury for purification. It was known in alchemy as the philosopher's egg, capable of being Hermetically sealed, in which various metals for purifying could 'incubate'.

Michael Maier's *Atalanta Fugiens*, Emblem 8, shows a rather coy knight poised with pointed toe and sword aloft, about to strike a huge egg balanced on a low table. This is another variation on the philosopher's egg, laid by the self-generating phoenix. See also Prima Materia.

Reuchlin, Johann (1455–1522)

Alias 'Pythagoras reborn' Reuchlin was the first great German Christian cabalist, of the School of Ramon Lull and Pico della Mirandola. He was as profoundly influenced as Lull and della Mirandola by the medieval Hermetic tradition, and the cabalistic tradition of the Jews in Spain and Italy.

Reuchlin, Johann



All three magi expounded on the wonder-working Power of the Word of God, the Tetragrammaton; all three combined Muslim, Jewish and Christian philosophy, and saw the 'Harmony of the World' as a possibility. Not satisfied with the arid scholasticism of Erasmus, the *theory* of theology, philosophy, and science, these three cabalists anticipated the practical magic of Trithemius, Cornelius Agrippa and Dee. They sought to empower language, to energize it, so that it rose beyond being mere words on a page. A man possessed of such divine glyphs acquired Faustian knowledge (the historical Faust was actually a contemporary of Reuchlin), but Pico and Reuchlin were quick to assert that this was for good, not evil. Their training through cabala was stringent. It was a matter of combining letters and numbers, incantations and magical codes, as laid down in sacred books.

The odd idea of Word made Flesh was of course not new; St Jerome and many of the Church Fathers had made it respectable. The



Johann Reuchlin

Conversation between the three characters in Reuchlin's *De Verbo Mirifico*: Baruchius the Jew, Sidonius the Greek and Capnion the Christian – who could be Reuchlin himself.





Rhazes

Word on which Reuchlin *et al.* dwelt so obsessively was the Logos, the Hebrew Tetragrammaton, the holy four-letter Word, inaudible, unsounded and unmanifest. By the addition of the ש, shin, 'sh', the unpronounced, uncreated became manifest in Christ, יהוה became יהושע. The breath of God breathed into the centre of the inaudible name, 'shhhhhhhhhh'.

The irony is that Reuchlin wrote his two wildly influential works on this topic – *De Verbo Mirifico* (1494) and *De Arte Cabalistica* (1517) – in Latin, even though he was fluent in Hebrew. He had been taught in Italy first by the famous Jewish Kabbalist Jacob Loans (d. 1506) and then by Obadiah Sforza; so the magical properties in the *sound* of the Hebrew letters was lost, as was the marvellous punning on meaning, to all but those familiar with the midrashim.

Perhaps, however, Reuchlin wanted ultimately to prove to Jews that Christ Jesus was the Messiah and convert them to Christianity, whose holy language was Latin, not Hebrew. The anti-semitic purges were rife all over Europe: Hebrew invited trouble.

If he were alive today, Reuchlin would surely fit in with any number of schools of meditation, chanting the Divine Om or working a magical mandala while sitting under a glass pyramid at Glastonbury. See also Cabala; Cornelius Agrippa; Dee; Midrash; Pico della Mirandola.

Rhazes (c. 864 – c. 932)

Abu Bakr Muhammad ibn Zakariyya al-Razi, known as the 'Persian Boyle', was from Khorasan or Rai, near modern Teheran. Little is known about his life, which to the Arabian world was not important, but more is known about his learning. This phenomenal alchemist-doctor was celebrated for his *Liber Continens* (*al-Hawi*), his unfinished encyclopedia of practical wisdom, edited by his pupils after his death. He first studied alchemy, mathematics, Greek philosophy and literature

at Baghdad, the centre of Abbasid culture, and then put his alchemy into practice as medicine.

In Ibn Khallikan's *Biographical Dictionary*, the entry for Rhazes says: 'In his youth he played the lute and vocal music – but later renounced these, saying that music proceeding from between mustachios and a beard had no charms to recommend it.'

Rhazes called into question all orthodox medicine, from the sacrosanct Galen himself; he questioned Islamic theology; and he pioneered metaphysics and scientific rationalism, bringing alchemy into the open. He used the same substances as his predecessors but described them in practical language, logging all his experiments carefully. He discussed simply, without mystique, the uses of alchemical apparatus and furnaces, and the Operations leading to the Magnum Opus: calcination, dissolution, sublimation and distillation. Thanks to him, names were given to various volatile substances – metals, stones, vitriol, borax, salts. His own laboratory was well equipped with flasks and phials, glass crystallizing dishes, water-baths, alembics, cucurbits and naphtha lamps.

He had specimens of all the metals then known, plus all sorts of stones, pyrites, malachite, lapis lazuli, oxides and leads. Like his forerunners, Rhazes believed that all substances consisted of the four elements and that metals contained mercury and sulphur. But he anticipated Paracelsus by suggesting a third ingredient, a 'salty substance'.

One of the first to record detailed case-histories, Rhazes was able to define the exact difference between smallpox and measles. Not only was he a practical alchemist, but he was at home with the Greek philosophers, writing commentaries on Plato's *Timaeus*, and on Aristotle, Hippocrates and Plutarch. Muslim in name, he was arch-Muslim in spirit.

Ripley, George (1415–90)

A Canon of Bridlington, Ripley wrote *The Compound of Alchemy*, which, on the authority



of his own text, was finished in 1471. In his great alchemical collection, *Theatrum Chemicum Britannicum* (1652), Ashmole includes *The Compound of Alchymie, a most excellent, learned and worthy worke, written by Sir George Ripley, Chanon of Bridlington in Yorkshire, conteining twelve Gates.*

Ripley demonstrated the theosophical, religious side of alchemy, as behove his nature as a good canon, a 'learned and rare Philosopher of our nation'. Just as the Trinity in the Godhead is Father, Son and Holy Ghost, so the alchemical Stone is a triune microcosm, a union of magnesia, sulphur and mercury. In his prologue to the *Compound of Alchymie*, Ripley writes: 'O Unity in the substance, and Trinity in the Godhead. As thou didst make all things out of *one* chaos, so let me be skilled to evolve our microcosm out of *one* substance in its three aspects of Magnesia, Sulphur and Mercury.' Another alchemist, Norton, was later to cite magnesia as one of the two substances that combine with salt to form the Stone.

Ripley divided his *Compound* into 12 Gates or stages of the Work:

- | | |
|----------------|-------------------|
| 1 Calcination | 7 Cibation |
| 2 Dissolution | 8 Sublimation |
| 3 Separation | 9 Fermentation |
| 4 Conjunction | 10 Exaltation |
| 5 Putrefaction | 11 Multiplication |
| 6 Congelation | 12 Projection |

Thanks to Eirenaeus Philalethes, who wrote *Ripley Revived* (1678), we have commentaries on the Canon of Bridlington, praising him highly. Eirenaeus summarizes Ripley's philosophy as Conclusions thus:

Conclusion 1: That as all things are multiplied in their kind, so may be metals which have a capacity of transmutation from imperfect to perfect state.

Conclusion 2: The possibility of transmutation is because metals can be reduced to their first mercurial matter.

Conclusion 3: That two Sulphurs only are related to the work, and that their mercuries

are united to them essentially.

Conclusion 4: Whoever understands the two Sulphurs and Mercuries shall find that the one is most pure Red Sulphur of Gold – which is Sulphur in manifesto and Mercurio in occulto, – while the other is most pure white Mercury – which is true Quicksilver in manifesto and Sulphur in occulto – these being our two Principles.

Conclusion 5: That if a man's principles be true and his operations regular, his Event will be certain, which Event is no other than the True Mystery.

Eirenaeus expresses Ripley's motto as: 'GOD IS THE ONLY GIVER OF WISDOM, whether of things above or things below.' The distinction between soul and spirit or psychic body was not known to Ripley as a priest of the Roman Catholic Church. The exposition belongs to Eirenaeus.

Rose nobles

Gold coins, first struck in the reign of Edward III (1327–77). Their value was established at 6s.8d. in 1559. There is an entry in the diary of one Abraham de la Pryme, dated 11 July 1696: 'This day I went to see Madam Anderson, and falling and talking from one thing to another, shee ran and fetched me down several old coins to look at, amongst which ane was a rose noble, one of those that Raymond Lully is sayd to have made [by] chymistry.'

Rose, Percy

A woman and author of *A Professor of Alchemy*, on the alchemist Denis Zacheire.

Rose windows

Gothic circular windows, shaped like a rose with 12 petals of refracting stained glass. Designed by the master-craftsmen of Chartres or Cluny, the glass was made from a secret recipe using antimony. The windows have a



Rosenroth, Baron Knorr Von

curious transformational effect on those contemplating them. Robert Lawlor compares the twelvefold rose window with the chlorophyll molecule, which is a dodecahedron, the life-giver that transforms light into organic substance.

In Sacred Geometry, the dodecahedron is connected with the fifth element, ether, the quintessence that Plato suggested the Creator used in forming the world, to link the higher planes with the lower world of the four elements. See also Chlorophyll; Dodecahedron.

Rosenroth, Baron Knorr Von (1636–89)

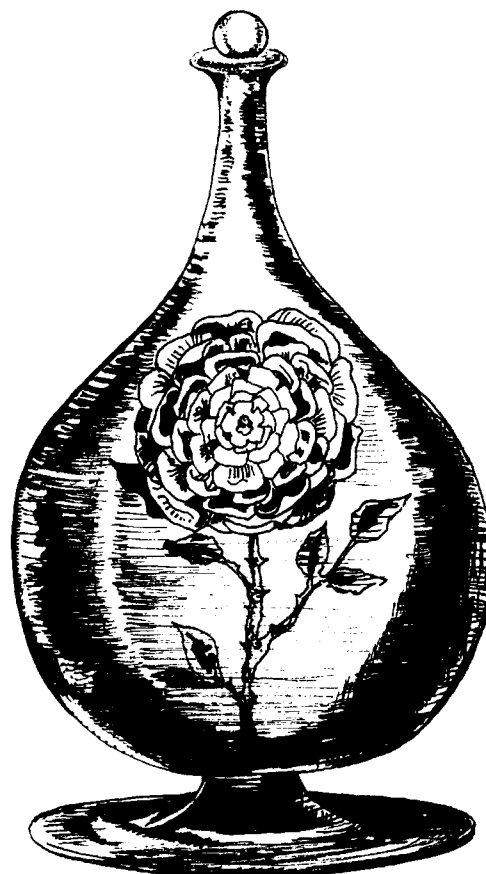
Rosenroth compiled the weighty *Kabbala Denudata* between 1677 and 1684 by collecting and translating into Latin many heterogeneous Kabbalistic texts and extracts from the *Zohar*, including the *Bahir* and the *Book of Concealment* (which he thought was genuinely the work of Shimon ben Yochai). Apparently, the devoutly Christian Rosenroth, friend of the young alchemist Mercurius Van Helmont, had hoped to convert Jews to a sort of Christian cabala through his vast labour of love. The *Denudata* missed its aim entirely, although it did open the doors of the *Zohar* to a largely ignorant seventeenth-century public.

Rosicrucians

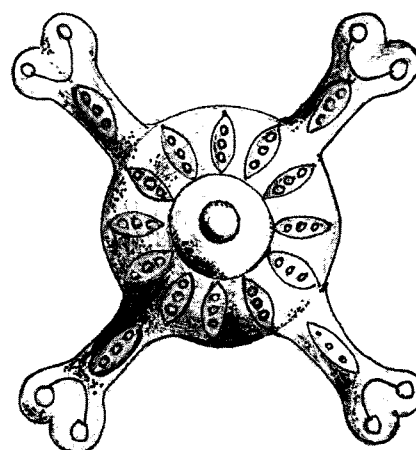
Members of the secret Brotherhood of the Rosy Cross, which appeared on the continent of Europe in the sixteenth century. Many were alchemists, but alchemists were not necessarily Rosicrucians. The Brotherhood included alchemy, magia and Kabbalah in their traditions, the Ninth Grade of their ritual being that of Magus/Alchemist.

Rudolph II (1552–1612)

Of all the patrons of alchemy, Rudolph II was perhaps the most passionate and indiscriminate. A Hapsburg, he was both nephew and brother-in-law to Philip II of Spain



Rosicrucian-alchemical emblem showing the spirit of a rose materializing from its ashes.



In occult chemistry, atoms of titanium, forming an octahedron overlaid with 'arms', resemble the old Rosicrucian cross and rose.

and great-great-grandson to the illustrious Maximilian I. Rudolph was crowned variously King of Rome, Emperor of Bohemia, Austria and Hungary, and Holy Roman Emperor. He carried the burden of too many titles, over territories that were rich in minerals and spectacularly beautiful. His glittering capital, Prague, was a magnet not only for the cultured but also for the political and religious misfits and for those on the make.

He was ambivalent in politics, religion and sexuality. Buttressed by sycophants, he was lavish in his gifts, although he was no fool. He built an observatory for his astronomers, studios for his painters, operating theatres for a host of physicians and a well-equipped alchemical laboratory. In his chimerical pursuits, he kept a court crammed with wonder-gems, alembics, lapidaries and grimoires. He fostered mystics, mechanics, poets and musicians in his genuine thirst for knowledge. However, he had a habit of knighting then punishing failed favourites. See also Bohemia; Brahe; Croll; Dee; Gemma Augustea; Grimoire; Kelley; Lapidary; Wunderkammern.

Ruland, Martin (early seventeenth century)

A father and son, both so named. Martin the Elder (d. 1602) was a leading Paracelsan doctor at Rudolph II's court in Prague and wrote, among other things, dictionaries of theological and medical terms. Martin the Younger (d. 1611) took over at court after his father's death, edited his father's work and styled himself – as well as 'Personal Physician to his Gracious Majesty the Emperor' (i.e. Rudolph) – a 'cubiculo chymiatrus', that is, alchemist from the elevated seat of the Emperor's theatre of alchemy. Martin wrote various tracts and compiled the definitive *Dictionary of Alchemy*. Among very sensible entries on metals, minerals and stones, Ruland reminds us that the old astronomers dedicated the Emerald to Mercury.

After two sketches by Arcimboldo showing Rudolph II wearing a) the crown with which he was crowned King of Rome (November 1575) in Ratisbon and b) the crown with which he was crowned King of Bohemia (September). The latter was made for Charlemagne and protrudes two finger-widths either side of Rudolph's head.

Rumi (c.1207–73)

Of Persian family, Jalal al-Din Rumi was an ecstatic poet and mystic, product of turbulent times, during the Mogul-Turko history of Konya. A mystical alchemist, he transformed through dance and sound his body chemistry. Brought up among Sufis, the Islamic mystics, Rumi founded the Mevlevi order of whirling dervishes, apparently to symbolize his whirling quest round the world in search of his first spiritual leader – who disappeared without trace.

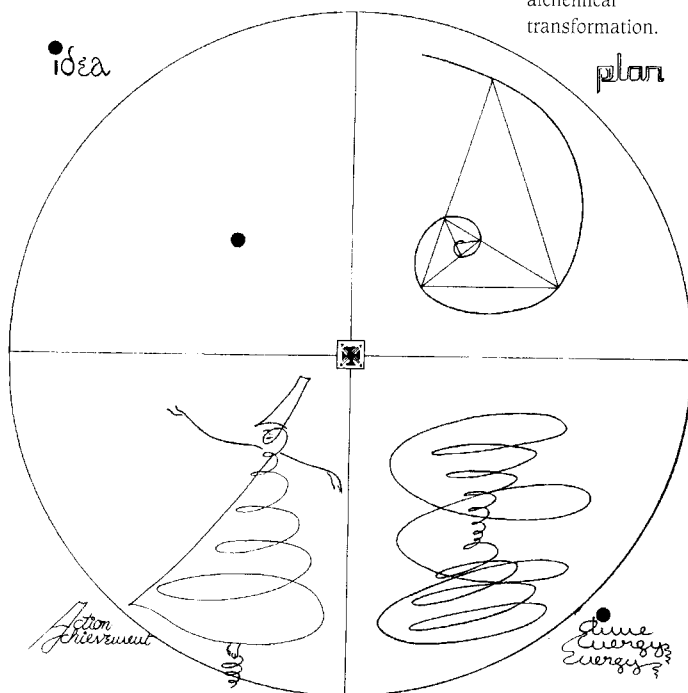
Dervish dancing represents the mathematical movement of the cosmos, planets and stars in Pythagorean harmony. Moreover,



Rumi



Dervish-dance in relation to sacred geometry and alchemical transformation.





Rutherford, Ernest

it is a form of prayer using the body as an axis. Centred like tops spinning, the participants circle in geometrical patterns, moving in and out of each other in sequence of place and time. Harnessing the natural laws of gravity, friction, centrifugal and centripetal forces, the dancers tune in to higher laws, whereby the whole becomes more than the sum of the parts, a stillness at the centre of the vibrating world. In such states, during all-night dancing-prayer sessions, Rumi would have interludes for spontaneous discourses and poetry-making with his followers, about the inner nature of life at the core of the Koran.

Rutherford, Ernest

(b.1871, New Zealand; d.1937, England)

In 1919 Rutherford vindicated the alchemical doctrine of transmutation of chemical elements by transmuting nitrogen into oxygen and hydrogen, through bombarding it with helium.

'This loud, unpolished colonial with the deft hands', and collaborator Dr Fred Soddy (1877–1956), radioactivists both, allowed that transformation of one chemical element into another was a possibility. Instead of the language of alchemy, they used that of nuclear physics.



Sabians

Syrian pagans from Harran and translators of many Graeco-Egyptian magical texts, which were taken from Egypt to the Middle East after the Islamic conquest in the seventh century. The Sabians worked alongside the Christian Nestorians, both sharing the Syriac language, the language of initiates.

St Margaret's Church, Westminster

Ashmole gives a detailed description of a former window in this church which signified, in coloured designs, the whole process of preparing the Philosopher's Stone. The designs, which include man and woman, sun and moon, a 'fair large red rose, a bright yellow glory, and a man clad in red, holding a white stone in his left hand, and a red stone in his right'.

Salmon, Guillaume

(late seventeenth century)

The author of the fashionable *Polygraphice*, the art of transmutation of metals and minerals, and the *Dictionary of Chymical Philosophers*. Salmon was a practising alchemist and a logger of the experiments of others.

Salt

The means whereby Philosophic Sulphur was united with Philosophic Mercury. See also Dew; Philosophic Mercury, Salt and Sulphur.

Scot, Michael (1175–1235)

An alchemist turned legend. An adventurer and traveller, who traversed the familiar paths of

translation between Spain, Italy and Sicily, expressly to learn Arabic and translate the great philosophic and medical classics. He became tutor to the Sicilian King Frederick II, for whom he composed the *Physionomia*, based largely on Rhazes's *Al-Mansur* and showing how one's outer state of health reflects the inner state and how to deal with it. Scot was phenomenally versatile. He translated Aristotle's *Ethics* from the original Greek (anticipating even Grosseteste), the evolutionary Averroes from the Arabic and many a magical treatise, such as the *Sirr-el-asrar* of the Therapeutics, together with works on necromancy and astronomy, such as the Mozarab Alpetrongi's *Sphere* (cumbersome but avant-garde). His lifelong Magnum Opus remained unfinished: his translation of Avicenna into easy Latin for the western universities.

At Frederick's court, he was mathematician, alchemist, poet and astronomer royal. He translated, sang and inspired eventual followers who happened also to be his critics, particularly Albertus Magnus, whose *De Animalibus* is pure Scot; Roger Bacon, who was so busy criticizing Scot's methods of translation that he failed to review his own totally inadequate grasp of the intricacies of languages; and Pico della Mirandola, who put up a horrified front over Scot's angel-magic in his *De Presagiis Stellarum*, but then used it himself!

A saintly man, perhaps even colluding with Pope Honorius, Scot was nonetheless refused the benefices he deserved. Understandably, the Archbishop of Canterbury was suspicious of this 'El Dorado of the foreign clergy', but so was his native Scotland. He became deeply depressed and started to wear a metal cap to prevent his own death that he had predicted would be from a falling rock. He travelled back to Scotland, where he died – whether under or not under a rock is left to the alchemical imagination. See also Bacon, Roger; Frederick II; Pico della Mirandola; Therapeutics.



Stryker

Stryker

A 'discrifier', a seer or peerer into crystals; a crystal-ball gazer, as was Edward Kelley, John Dee's hoodwinker.

Sendivogius, Michael

(b. 1556; d. post 1630)

Peripatetic, maligned and mysterious, this colourful entity, figment or actuality, known as Sendivogius, was rumoured to be the greatest alchemist of his time. That Newton pondered for years over the *Novum Lumen Chymicum* is recommendation enough, even if that work was not by Sendivogius.

His name got everywhere, like Mercury slithering about. He appeared to know everyone in Poland, Prague, the Palatinate, Austria, Saxony, Greece, Italy – the Orient too, it was rumoured. Like a spy, Sendivogius lurked in corners in his frogged jacket, cloak and Polish hat. Maybe he did collar the unfortunate alchemist, Seton, and clothe Seton's work as his own.

Sendivogius, alias
Anonymus Sarmata (the
nameless Pole).



He was apparently a Pole from Moravia, possibly a Rosicrucian involved in disseminating its first tracts, such as the *Fama Fraternitatis*, or the *Consideratio Brevis* of Philip à Gabella (perhaps he even was Gabella). He studied in Krakow, the city where magic was taught in the university and preached from the pulpit, where the Faust of the *Faustbook* studied Chaldean, Persian and Arabian spells and conjurations.

Sendivogius was certainly in Prague for a while, reputedly transmuting gold for Rudolph II, long enough to get thrown into prison at least twice; he appealed to be let out in 1597. He was indeed known to Rudolph's doctors, especially Maier, who admired him sufficiently to choose him as the last of his Twelve Heroes in the *Symbola Aureae Mensae*.

Having paced round Poland, pullulating with puns and powder of projection (Seton's or his own), he took – say some – to soldering together offcuts of gold and silver, covering them with mercury and stamping them as coins, so that he could go out into the marketplace, put them in a crucible to melt off the mercury, and – hey presto! – produce gold and silver coins before the credulous crowd.

Sendivogius lay low for a while, then turned up in Vienna in 1617, finally washed up in Krakow, Poland, in the 1620s. The gossip reporter, Brandau, wrote in 1630 that Sendivogius was still alive and married to the widow of a successful French alchemist who had died in Prague. Now, with reservations on the 'successful', it could have been one of three alchemists: Kelley, Seton or Nicolas Barnaud. But considering the unfortunate end of the two former, it was likely to be Barnaud. And he was French. But the identity of neither Sendivogius nor his wife is certain, nor is the date of his death, although it is thought to be 1636.

The work that goes under his name (when not under Lull's or Seton's), the Twelve Books of the *New Chymical Light*, is indeed remarkable. It was published first in Prague and Frankfurt simultaneously (1604), then



Paris (1606) and Cologne (1610), the author disguising his name in easy anagrams.

Sendivogius (if it be he) said the *Novum Lumen* was drawn from the fountain of nature and of manual experience/chemical experiment: 'et nature fonte et manuali experientiae de promptum.' His tone is a blend of philosophy, sanctity and secrecy, based on a thorough understanding of how man can manipulate nature and how the four elements interact.

He begins by observing that in an age when deception and false alchemistic 'receipts' are touted around, when virtue and vice are not distinguished, true alchemy is still to be respected. There are still a few adepts, he being one, who should remain incognito. Sendivogius warns readers that the esoteric meaning is what has to be understood, not the 'outward husk' of his words. He urges the adept, once the hidden has become manifest, not to tell any unworthy person. He advises him to have the humility to listen to nature and not to despise the study of so simple a thing as 'natural generation' – i.e. evolution and reproduction – and by analogy, alchemical multiplication. Our learning now is 'greatly superior to the Ancients, save in one respect: they knew the secret of preparing the Philosopher's Stone'.

Sendivogius goes on to relate how nature is divided into four 'places' and four 'qualities', which are in all things, yet do not agree among themselves, as one is always striving to obtain the mastery over the rest. It is very important for us to know nature's places – those that are most in harmony. Like should act on like; if we want to improve on nature, we must observe her, to know how she does it. If, for instance, we want to improve a metal, we must take the metallic substance, both the male and female aspect of it. It is as impossible to produce a metal out of a plant, as to make a tree out of a dog!

Then Sendivogius investigates the 'seed' of nature, the essence, the generative power. Natural growth is automatic; whereas man's growth is not: man has free will from God.

Sendivogius gives exact parallels between man 'inseminating' a woman and the four elements being magnetized to the earth and projecting their qualities upon the margin or circumference. What nature cannot absorb, she spews up in stones and rubble: 'This is the fountainhead of all things terrestrial.'

Furthermore, Sendivogius examines the combining of the four elements into metals, and the influences of the sun and the moon. He harks back to the nature of the atom, the microscopic 'seed' within each body 'that is its 1/8200th part'. Having touched on modern genetics and atomic theory, Sendivogius then veers off along Paracelsan lines of the three principles: mercury, sulphur and salt, to examine the alchemical Magnum Opus. See also Faust; Lull; Maier; Seton.

Sepher Yetzirah (The Book of Creation)

A bible for medieval Kabbalistic alchemists, which probably belonged to the Geonic period. It became so popular in the ninth and tenth centuries that Saadia, the Jewish sage (892–942), wrote a commentary on it, anticipating Maimonides. It provides the link between early mystic Jewish literature and the Kabbalah of the Middle Ages around Moses de Leon. Reuchlin is purported to have translated it into Latin well before Postel's version in 1582 made it widely known in the West.

It formulates both the doctrine of emanations – the 'splendours' that emanate from God – and the magic power of the Hebrew alphabet. The *Sepher* originated in the hieroglyphical alphabet that Moses enshrined in his Kabbalah. The basis of the hieroglyphical mysteries was an alphabet in which gods were represented by letters; letters represented ideas; ideas were convertible into numbers, and numbers were perfect signs.

Sephithoth

A late Hebrew word from the root S-PH-R, to number. In the Kabbalah, the sephithoth are the



Seton, Alexander

ten emanations or Divine Attributes through which the Infinite enters the Finite. They constitute the fundamentals of all existence, and are seen as the ten principles that mediate between God and the universe.

By the early Renaissance, the Hebrew sephiroth had become fused with Neoplatonic thought. Creation is envisaged as taking place in a series of emanations, starting with God. From God emanates the first 'splendour', which gives rise to the rational soul; from this emanates a lesser splendour, which produces the vegetable soul; from this, comes the material world.

Seton, Alexander

(early seventeenth century)

Another one of the wandering alchemists, cosmopolites, who appear dotted over the landscape of alchemy, either nameless or under assumed names. They traipse around Europe and further afield, with their powder of projection, performing alchemical Operations and getting others to perform transformations – often on old scraps of leading – before they step back into the shadows, or get embroiled with emperors and officials, propelled by some uncontrollable zeal. They incur jealousy and suspicion, then suffer imprisonment, punishment and sometimes a horrible death.

Such is the progress of this pilgrim, the myrionymous Seton, variously Sethon, Sidon, Scotus, Sitonius, Sidonius, Suthoneus, Suethonius or Seehthonius.

And this is the myth. In the summer of 1601, a Dutch vessel was wrecked off the coast of Scotland near Edinburgh. Some of the crew were rescued by Seton, who received them into his house (called 'Sea-ton'), by the sea. He treated them with great humanity and gave them the wherewithal to return to Holland. In 1602 Seton visited the captain, James Haussen, at Enkhuysen in Holland, and confessed he was a Master in Alchemy. He performed several transmutations. Haussen, understandably

impressed, couldn't resist telling the local doctor, and gave him a piece of gold that had been produced from lead by Seton in Haussen's presence on 13 March 1602.

And so word of Seton spread, ultimately to his detriment. He roved wherever 'the need he felt to make Hermetic propaganda took him': Amsterdam, Rotterdam, Italy, Zurich, Basel. *En route*, he convinced such sceptics as the well-respected Dr Wolfgang Dienham of Fribourg and Dr Jacob Zwinger of Basel. Dienham's eyewitness account of Seton, directing him in the powder-projecting Operation, makes absorbing reading. Seton, short and stout, with high colour, red hair and French-style beard, in a black satin suit, acted as Master of Ceremonies to the two doctors, who were fumbling round with lumps of lead and sulphur bought by the wayside and a crucible borrowed from the local goldsmith. Says Dienheim, 'Although we were as doubting as St Thomas himself, we did everything he told us', and the projection was accomplished. They ended up with gold 'better even than the excellent Hungarian and Arabian gold'.

Seton continued along his golden path through Strasburg, Cologne, Hamburg and Munich, performing and 'multiplying', until the curiosity of Christian II, the young Elector of Saxony, was aroused. When he could not elicit the alchemical recipe from Seton, he tortured him gruesomely with rods, burned him with melted lead, pierced him with needles and tore at him with red-hot tongs. Then left him to solitary starvation in prison.

Meanwhile, in search of the Stone, Sendivogius, an habitué at the elector's court, came to see Seton and rescue him, in exchange for Seton's red powder, his secrets and his books.

Poor, weak Seton lasted in protracted agony another two years before dying. The contended book, *Novum Lumen Chymicum*, whether his or not, is an unusual insight into natural science and budding embryology. See also Powder of Projection; Sendivogius.



Siena Cathedral

A goldsmith's fantasy of a cathedral. Beneath the flying dynamics of prophets, Miriam and Mary and the Archangel Michael, is a mysterious floor known as Hermes' Pavement.

The senex Hermes is presented as contemporary with Moses. Instead of the Ten Commandments, he extends in his right hand a book with these words on the open pages:

'SUSCIPITE O LICTERAS ET LEGES EGIPTII' (Egyptians, support your letters and laws). In his left hand, Hermes holds a table with gobbets of his 'own' writings from the *Corpus Hermeticum*, asserting that God the Father made God the Son, in whom He was well pleased, who is called the Sacred Word.

In this, the whole paving is meant to link the wisdom of the Ancients with Christianity.

Signatures

External signs or 'give-aways'. Paracelsus's doctrine of 'signatures' is summed up in his pithy sayings, 'That which fills the heart overflows in the mouth' and 'in extremis things reveal their nature'.

Paracelsus believes that people's inner qualities have external corresponding characteristics, which serve as signs through which everything internal can be discovered. This idea lies behind the notion that 'like cures like'. The external manifestation would be a clue as to what is going on internally. The paradox is, the higher up the scale of evolution, the more hidden is the being's 'inwardness', yet the more unambiguous is its outer form. The most hidden of all is the essential core of man, while least hidden is the inner nature of plants, which are obviously expressed in their shape and colour.

Silver

One of the three base metals often used as *prima materia* at the beginning of the Work. See also Cupellation; Philosophic Salt and Sulphur; Prima Materia.



Siena Cathedral: HERMIS MERCURIUS TRIMEGISTUS in the pavement design of 1488.

Soddy, Dr Frederick (1877-1956)

Nobel prize-winner, friend and collaborator of Ernest Rutherford. This radio-activist, who lived in sensible Sussex, was not unsympathetic to the notion of the alchemical transmutation of metals.

In his *Interpretation of Radium* (1909) occurs this paragraph:

It is curious to reflect, for example, upon the remarkable legend of the Philosopher's Stone, one of the oldest and most universal beliefs, the origin of which, however far back we penetrate into the records of the past, we do not probably trace its real



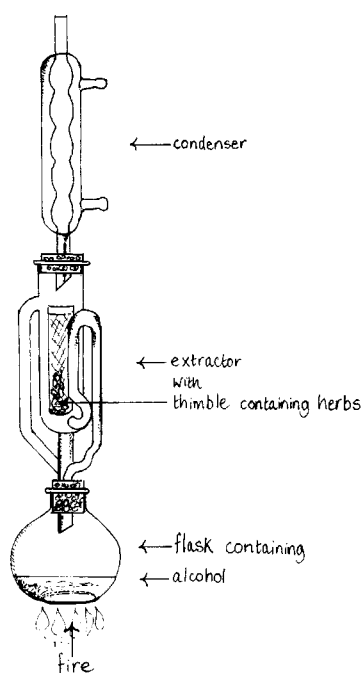
Solve et coagula

source. The Philosopher's Stone was accredited the power not only of transmuting the metals but of acting as the elixir of life. Now whatever the origin of this apparently meaningless jumble of ideas may have been, it is really a perfect and very slightly allegorical expression of the actual present views we hold today.

All this from the man who coined the word 'isotope' and pioneered nuclear physics.

Solve et coagula

The whole alchemical process can be summed up in these two main principles: solve, analysis = breaking down, separating; and coagula, synthesis = putting together the purified parts.



Soxlet extractor

Soxlet extractor

A modern apparatus for preparing the herbal elixir: the first stage that the apprentice learns in alchemical Operations. The extractor has three parts – a flask, an extractor and thimble, and a condenser – and covers the whole process of refinement and filtering.

Spagyric

Derived from 'spao' (to draw/divide) + 'ageiro' (to gather/bind), illustrating the motto 'dissolve and bind'. Another of Paracelsus's coinages for his own particular style of alchemy.

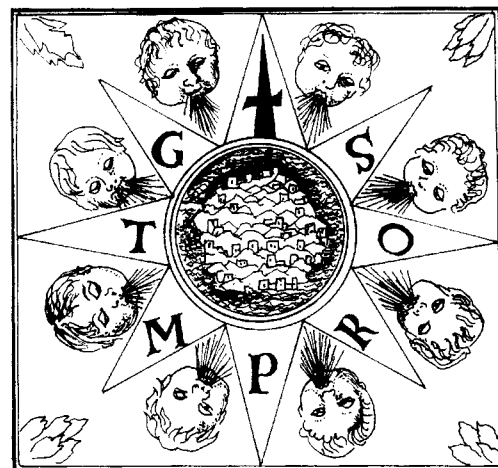
Splendor solis (*The Splendour of the Sun*)

Probably the best-known of the alchemical allegories by Salomon Trismosin in the late sixteenth century, made famous through its

magnificent illuminated emblems of the Magnum Opus.

Stake

A number of alchemists were burned at the stake, including Cecco d'Ascoli, alchemist and magician, in 1327 (Florence) and Giordano Bruno in 1600 (Venice). Several narrowly escaped – like William of Ockham in 1324 from Pope John XXII for saying the Pope was only human. Knights Templar were reported from time to time to have been burned at the stake.



The Rose of the Winds, the eight-pointed compass-star, in *L'Acerba* by Cecco d'Ascoli, the alchemist burned at the stake in 1327.

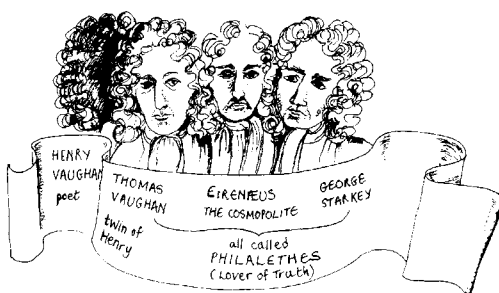
Starkey, George (1627–66)

An alchemist from Boston, alias Eirenaeus Philoponus Philalethes, who migrated to London in 1650 with a number of Philalethes manuscripts. He was linked, if not fused, with Eirenaeus Philalethes, but not twinned with Eugenius Philalethes, who was already twinned!

Out of this tripartite conundrum, it emerges that three major works were published under the name of Philalethes: *The Marrow of Alchemy* (1654), *Pyrotechny Asserted* (1658)



and *A True Oil* (written in two versions at least, between 1660 and 1664). According to A.E. Waite, Starkey was the author of the first part or poem in the *Marrow of Alchemy*, but not the second, and still less of the *Open Entrance* and other notable tracts under the name of 'Eirenaeus'.



The Philalethes trinity

Stephanos of Alexandria (610–641)

A philosopher, mathematician astronomer and alchemist, who was in favour with Herakleios I, an early Holy Roman Emperor version of Rudolph II of Bohemia, at Byzantium. Alchemy had become a theme for rhetorical, poetical and religious compositions. Transformation of gold was now a symbol of man's regeneration and transformation into a more spiritual state.

Stolcius, Daniel (early seventeenth century)

Also known as Daniel Stolz von Stolzenberg, this alchemist and physician was a refugee from the horrors of Hungary, 1615–18, and so ardent an admirer of Michael Maier that he collaborated with Maier's publisher, Lucas Jennis, in Frankfurt to produce in 1624 two versions of an alchemical emblem-book which would incorporate *ad immemoriā* many of the copper-plates by Merian and De Bry used in Maier's works earlier. Stolcius's books were his *Chemical Pleasure-garden* (in Latin) and his *Little Chemical Pleasure-garden* (in German). The latter, the *Chymisches Lustgärtlein*, decorated with 'charming figures engraved in

copper and illumined and illustrated with poetic pictures', was intended not only to 'enliven the eyes and spirit, but at the same time awaken a very deep contemplation on natural things'.

The Latin version, the *Viridarium Chemicum*, had epigrams in Latin and again used copper-plates from Jennis's collection, largely those already used in books by Maier and Mylius. Apart from these two works, Stolcius studied astronomy – he had published a speech about stellar influence on wars, *Oratio de Bellorum ex astris praedicatione*, in his university days in Prague (1618) – and it is thought that he practised alchemy and medicine in England and in Danzig, and that he was in touch with the educational reformer Comenius in the 1630s.

Suidas

A famous Greek lexicon-cum-encyclopaedia, compiled c. AD1000 and containing a heterodox collection of gleanings in many hands from histories, biographies, grammars and doxographies of classical and Alexandrian Greek writers. The *Suidas* was a source book for anecdotes compiled by the likes of Maier and Pernety in their mytho-alchemical dictionaries.

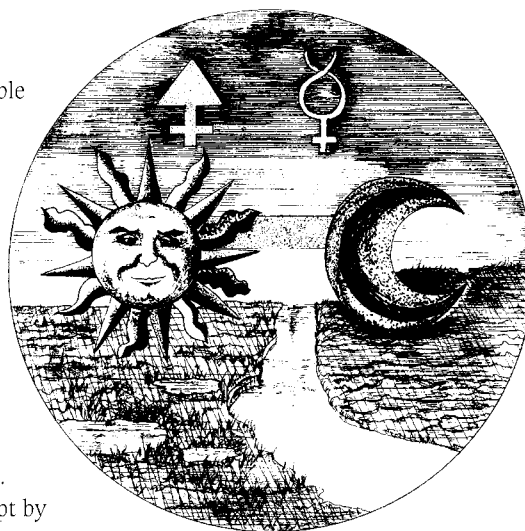
Sun or gold with the symbol of Sulphur ☿ connected to the moon or silver with the symbol of Mercury ☿.

Sulphur

The male combustible principle. In prime matter it is contained in ordinary gold. See also Philosophic Mercury, Salt and Sulphur.

Sun

The symbol of Gold. Worshipped in Egypt by





Swedenborg, Emanuel

followers of Hermes as Amon-Ra at Heliopolis. He was depicted with a hawk's head surmounted by a solar disk encircled by a uraeus (cobra), and carrying the ankh (life). Amon-Ra at Heliopolis was the personification of the evening sun at the end of the creative process. See also Philosophic Mercury, Salt and Sulphur.

Swedenborg, Emanuel (1688–1772)

The son of a deeply devotional Bishop and Dean of Uppsala University, Sweden, who in certain superficial ways resembled John Dee. Both were diplomats to the Continent, advisers to the reigning monarch, writers on philosophical and spiritual subjects, interested in alchemy and, chiefly, both communed with angels. But Swedenborg's personality was a different matter. He had no 'alter ego' egging him on, no Kelley with a crystal ball, no paraphernalia, seals and sigils.

He was a modern scientist and anatomist, no less than an explorative alchemist, probing into the physical properties of minerals and metals and their relationship with metaphysical properties. His *Opera Philosophica et Mineralia* (1734) on metallurgy and his *Oeconomia Regni Animalis* on human anatomy were read widely over Europe, particularly the major section on the brain. Not only did he devote many years to external studies into animal nature, but he was also exceptionally interested in the nature of 'soul'. He examined both physiologically the cortical substance of the brain and psychologically the brain as the exclusive seat of higher psychical functions. His insights into this, put in perspective cosmologically, roused enough respect for the Royal Swedish Academy in 1907 to publish extensive collections of Swedenborg's work on geology, chemistry, physics and cosmology.

Travelling extensively and mysteriously with freemasons in 1738 to Italy for hieroglyphics and at other times to Amsterdam, London and Prague, Swedenborg seems to have

been initiated into a masonic lodge with politico-cabalistic aims.

1743 was Swedenborg's *annus mirabilis*. He later wrote to an English Clergyman about the event he noted at the time:

I have been called to a holy office by the Lord Himself who most graciously manifested Himself in person to me, His servant, in the year 1743, when He opened my sight to the view of the spiritual world, and granted me the privilege of conversing with spirits and angels, which I enjoy to this day.

Thereafter, he 'went Hermetic', and embarked on a life of spiritual alchemy, transforming his being through profound contemplation of the Bible and renouncing all his professional studies of material science. His hefty *Arcana Caelestia* (1749-56) expounds rather like the old midrashim on the Torah, a Kabbalistic commentary on Genesis and Exodus. It translates into Celestial Secrets or Hidden Lore of the Heavens.

In the year before his death his *Vera Christiana Religio* (The True Christian Religion) contained a summation of his beliefs that 'God is One in Essence and in Person, in whom is the Divine Trinity, and that He is the Lord God the Saviour Jesus Christ'.

The Theosophical Society that sprang up in his wake in Wellclose Square in London's East End had a huge impact on William Blake, who joined it in the 1780s.

Synthemata

Word used by Iamblichus to mean signs or tokens of the Gods, through which they express their power.

Syriac

Syrian, the language through which alchemy was transmitted from Greek to Arabic; a Semitic language of the eastern borders of the Mediterranean, cognate with Phoenician,



Aramaic and Coptic. In Egypt during the Eighteenth Dynasty (1567–1320BC) Syrian was the language of a conquered people and under the influence of hieroglyphs. Syrian deities, on the other hand, had huge cult followings in Egypt at that time.

In later dynasties after the conquest of Alexander the Great in 332–323BC, Egyptian was superseded by Greek as the language of culture, until the first centuries AD, when Coptic (Christianized Egyptian) and Syriac were revived as liturgical and literary languages. The first-named disciples of Christianity dwelt in the Syrian towns of Antioch and Byblos, long the centre of the papyrus trade. They saw their rôle as disseminating all learning whether classical, alchemical, magical or Christian.

From the fifth century onwards, the Syriac scholars were mainly Nestorians. Their major literary works were their *Peshitta* or Old Testament (AD464) and their translations of the Greek classical and alchemical texts. They took these with them on their persecuted treks from Constantinople and Edessa to Nisiblis, Jundeshapur, Damascus and Baghdad, where two Syriac giants of alchemical translation of the ninth century produced their work: the Hunayns. The comings and goings of Jewish and Syriac sages over the well-beaten path between Babylonia, Syria, Egypt and Spain is documented in *The Book of Ways* (AD847) by the Postmaster General of Baghdad, ibn Khurdadbih.



Tabarmq

The mysterious ingredient that is absolutely necessary in the making of gold, mentioned in the wonderful Muslim tale about a dervish who made a lot of money conning people into buying 'tabarmq': it was really a glutinous mix of fish-glue and charcoal – a complete fake.

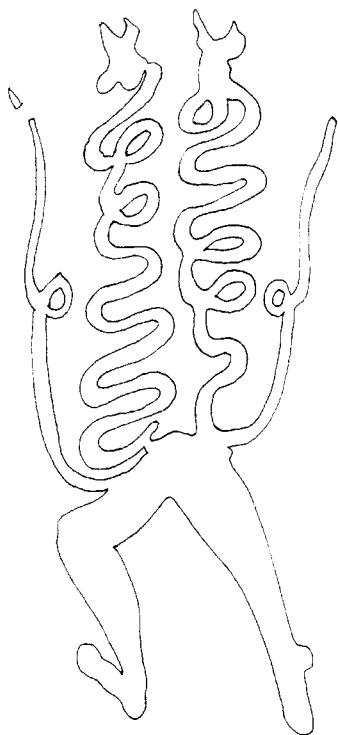
Talmud

From the Hebrew L-M-D = to teach; the body of Jewish traditional law consisting of the mishna (precepts) and the gemara (commentaries).

Taoist calligraphy

Chinese handwriting drawn from the magical principles of Taoism, whereby shape-drawing

Taoist calligraphic spiral of magic reflecting the lines traced by a shaman's feet in the dance. The curving lines allowed man to contact the spirit world. The thin lines represented heaven, the thick ones the earth.



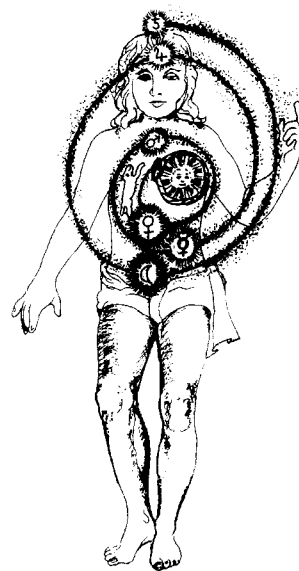
could lead to shape-shifting. The Chinese believed (like all peoples) in the power of the drawn line. Imbued with incantations, a two-dimensional form could become a three-dimensional embodiment or talisman.

Targums

Aramaic paraphrases of the Hebrew Bible.

Tattwic tides

From the term 'tattwa', Hindi for 'vibration'. Each level of consciousness has its own vibration or 'tattwa'. The rhythms, courses and flow of energies both in the human body and in the universe are the tattwic tides. The correspondence between the planetary systems and cosmic cycles and the human cycles is the basis of the Hermetic 'as above, so below'. In the West, the flow of the tattwas in the human body was known as the 'humours', corresponding to the heavenly tattwas, the zodiac rising and setting of sun, moon and constellations. See also Chakra; Emerald Tablet; Galen; Physic; Planet.



The psychic centres of the body, associated with the chakram and the planets.

Thaumaturgy

'Real artificial magic', according to Campanella. Dee's 'Thaumaturgike' was his

expression for the art of making machines, i.e. Boethius' brass statue of Diomedes playing a trumpet, or the moving statues that Hermes Trismegistus described in the *Esclapius*, or Albertus Magnus' speaking brass man, or De Caus' sighing statues in the gardens at Heidelberg. Real thaumaturgy was the applied science of mechanics, of robots. In the Renaissance, science was given a prod by people's interest in magic.

Therapeutics

Rosicrucian healers, in the sense that Maier used the term. Therapeutics go back to the 'Therapeutae' of the School of the Essenes in Alexandria, who studied ancient Hermetic writings. Renowned as Sun-worshippers, they were codified in the precious *Sirr-el-asrar* (Secret of Secrets), an alchemical book at one time ascribed to Aristotle but thought to have been rescued from an aged hermit of a Sun temple built by Esclepius. The *Sirr* is devoted to the body beautiful, to the relationship between bodily and spiritual disease and to the ways of curing one through the other, with the help of metals and plants and their auspicious correspondences with the planets and stars. As above, so below, the text is entirely therapeutic in tone. See also Aristotle; Esclepius.

Theurgy

Angel-magic – or mortal folly? Theurgy was John Dee's form of angel-magic: conjuring up angels on three different levels. The lowest level was to tinker with the natural world, the next level was to tap into the mathematical, celestial world, and the highest, on a level with Gods, was to communicate with beings in the supercelestial realms.

Critics of Dee and Cornelius Agrippa maintained that theurgy was interference, when all was said and done, with the universe, and that such tamperings at the best played tricks upon the imagination, and at the worst, were evil.

Thoth

The God of Letters, the Measurer, often depicted carrying a staff marked with a cubit. The ibis was sacred to him, and ibis-headed statues were common. In Hermes's chief temple at Hermopolis, many mummified ibises have been found.

All scholars agree that Hermes Trismegistus, the father of alchemy, was the same as the Egyptian Thoth. Even Isaac Casaubon, the seventeenth-century debunker of Hermetic texts, did not deny the possibility of an ancient sage called Hermes Trismegistus.

The idea of the writings of Thoth is very old; it goes back to the Eighteenth Dynasty (1567–1320bc). Plutarch and Clement of Alexandria refer to the *Writings of Hermes*, and even though the writings in the *Book of the Dead* may not much resemble the later *Corpus Hermeticum*, there could be a connection.

Timaeus

Of all works throughout recorded time, this is the one that influenced alchemists most. Written by Plato, it has the flavour of a creation myth that can't be proved or disproved. It is the equivalent of Stephen Hawking's Black Holes and other modern phantasmagoria. Plato said that the *Timaeus* is the best expression he can manage on Creation and all questions you might want to know. It is not subject to opinion so won't go out of date. It incorporates a whole code of science that is not empirical, but rather alchemical, about things changing into each other.

Torah

Originally the word meant the teaching and judicial decisions given by ancient Hebrew priests as a revelation of Divine Will, the word Torah came to be used for the body of the Jewish Law, and finally the Pentateuch (the first five books of the Old Testament).

Torah





Trickster

Trickster

The transformer. In alchemy, Hermes, identified with the Egyptian Thoth, was the catalyst for this, being a trickster himself: a moon-god, subconscious, silver, quicksilver. In transmuting from Mercury into Hermes, he has to cross the borders of the unconscious (moon,

volatile, winged) in order to reach the perfect sun-state of consciousness (gold).

Trismosin, Salomon

(fifteenth or sixteenth century)

A more obscure teacher of Paracelsus than Trithemius, Trismosin claimed to possess the 'Catholic tincture and medicine'. It is said that his real name was Pfeiffer and that he was still alive at the end of the seventeenth century. At least, those are the reports of a French traveller who said that he had seen him.

The two alchemical works ascribed to Trismosin have been the source of endless editing, extracting, cataloguing, printing, backing and advancing. *The Golden Fleece*, first printed in German (1598), contains an autobiographical fragment attributed to Trismosin; whether the rest of the text is his is open to question. In 1602 a portion of the German work was translated into French, and partial versions of this French text came out in English (kept in the Sloane Collection). Moreover, in the Ashmolean Library, there is an English translation of extracts from the French by William Backhouse called *The Flower of Treasures*.

Splendor Solis is a priceless volume (in the Harleian Collection) with very beautiful, painted pictures. This text is extant in three languages. There are several printed editions and at least three manuscripts. Kegan Paul reprinted the English version (1921), with black and white plates replacing the Harleian illuminations.

To complicate matters, the *Splendor Solis* forms Part III of the original *The Golden Fleece* (*Aureum Vellus*) of 1598 above! In recent times, the whole collection has come to be considered as spurious, and Trismosin as fictitious. The autobiographical preamble could be a publisher's device to introduce the tracts that follow.

Pictorial analogy of purification by water in the alchemical process. After a sketch for a French version of *The Golden Fleece*.

La Toyson d'Or

Figure 20.



Article second.

Trithemius, Johannes (1462–1516)

The abbot of Spanheim and Würzburg. Upon him rests almost the entire magical tradition in alchemy during the Renaissance. His influence outshines virtually every other magus. Significantly little is known about his person, his habits, his magical Operations, his lectures or his movements. He was a Benedictine monk of irreproachable orthodoxy (to the outside world) and of unimpeachable conduct. He was the instructor in alchemical theurgy to both Cornelius Agrippa and Paracelsus.

He understood hypnosis and telepathy (today he would be thoroughly at home with radio signals and electronics), and lectured at the University of Basel, where apparently Paracelsus was first inspired by him. When he became Abbot of St James, Würzburg, he initiated Paracelsus in magic and proof-read the manuscripts of the *Occult Philosophy* for Cornelius Agrippa, giving him the apt advice: 'Speak of things public to the public, but of things lofty and secret only to the loftiest and most private of your friends. Hay to an ox and sugar to a parrot. Rightly interpret this, lest you, as some others have been, be trampled down by oxen.'

Trithemius was more discreet than his 'venturesome disciple Agrippa'. All his magical works concentrated on concealing mysteries. He wrote a history of magic entirely in pantacles entitled *Veterum Sophorum Sigilla et Imagines Magicae*, while in his *Steganographia* (1506) and *Polygraphia* (1507) he gives the key to all occult writings and in veiled terms explains the real science of incantations and invocations.

One monarch who was bitten with curiosity about magic was the great-great-grandfather of Rudolph II, Maximilian I. He cross-questioned Trithemius on theological matters, so Trithemius replied in his *Book of Eight Questions* (1515), but he had a special matter that would be useful to the Emperor: *Die Septem Secundeis, id est Intelligentiis sive spiritibus orbes post deum moventibus* (a

Trithemius, Johannes



simplified *Steganographia* and variant on *De Septem Secundadeis*). Trithemius wrote as a historian, not an astrologer, and this work took the form of a chronicle, based on the periods of archangelic rule starting with 5206BC as the creation of the world. It is a history of Time, with archangels guarding each period of seven cosmic years (by our reckoning, 354 years and four months). So Oraphiel, Anael, Zachariel, Raphael, Samael, Gabriel and Michael took

Library, sixteenth century.

Steganographic signs such as Trithemius used.

Arsenicum FS . G . H . I .
 Antipigmentum, + α . C
 Ruber Arsenicum V . C .
 Viridis Arsenicum O . V .
 Albus
 Labo L . H . V . C .
 Crocum H . O . V . C .



Turba Philosophorum

turns to have his corresponding planet and day of the week. By Trithemius's time, it was Samael's turn (from the year AD1171 to 1525) and his planet was Mars; his day, Tuesday. Thereafter, said Trithemius, it would be Gabriel from AD1525 to 1879, with the Moon and Monday, followed by Michael from AD1879 to 2233 with the Sun and Sunday.

Although Trithemius wrote in a practical way, he did include, after the manner of adepts, his pantacle symbol (rather like Dee's *Monas Hieroglyphica*) in this manuscript, of which a few copies survive. The work was later published in German as *Von den sieben Geystenater Engeln* (Of the Seven Holy Angels, Nuremberg, 1522). A Czech version of Trithemius's works, presented to Maximilian, appeared almost at once in the Royal Library at Prague. His magical formulae sparked off not only Cornelius Agrippa and Paracelsus, but also Reuchlin, Pico and Dee, who exclaimed with relief on acquiring a rare copy of the *Steganographia* at Antwerp (previous haunt of Cornelius Agrippa), where he spent ten days copying the text.

Trithemius's library alone was a source of wonder. His great friend Bishop Dalberg led Reuchlin and friends on a library trip via Worms and Oppenheim to the library of Nicholas of Cusa, then on over hill and dale to Spanheim to absorb and copy the magical collection of Trithemius's manuscripts in five languages. His greatest sources of wisdom included such books as the *Picatrix*, the Teucer astrology of Ibn Wahshiyya and early Kabbalistic midrashim.

Turba Philosophorum

An imaginary alchemical debate between nine Ancient Greek philosophers. Originally composed in Arabic, it appeared in Latin in the thirteenth century and immediately became popular. After a debate on the Alchemical Art and the indispensableness of the Stone, the *Turba* ends with a description of the Stone as 'white, volatile, concave, hairless, cold, and yet

no one can apply the tongue with impunity to its surface'. See also Xenophanes.

Twelve Heroes

Michael Maier's choice of 12 alchemists were recorded in his *Symbola Aureae Mensae Duodecim Nationum* (Contributions to the Golden Table by Alchemists of Twelve Nations). The 12, in roughly chronological order, are: Hermes the Egyptian, Maria the Jewess (identified as Miriam, Moses' sister), Democritus the Grecian, Morienus the Roman, Avicenna the Arabian, Albertus Magnus the German, Arnoldus Villanovus the Frenchman, Thomas Aquinas the Italian, Raymond Lully the Spaniard, Roger Bacon the Englishman, Melchior Cibirensis the Hungarian and Anonymus Sarmata.

Maier presented the 12 not so much in a 'symposium' as has been suggested by the word 'Table' (*Mensae*) in the title, but in 12 books, each devoted to one of the 12 disciples of alchemy. The format within each book is thesis, antithesis, summing up in favour of the alchemist. Most of the heroes do not need much interpretation, apart from the last two.

Melchior Cibirensis is Nicholas Melchior of Swabia, the fifteenth-century composer of an alchemical *Mass* dedicated to his patron Ulászló II, King of Bohemia (1471–1516) and of Hungary (1490–1516). This *Mass* inspired Maier in his *Atalanta Fugiens*. The picture in the *Symbola* accompanying Melchior Cibirensis shows a devout priest in full regalia celebrating the Eucharist, while a strange and podgy Virgin to the left is suckling the Infant Christ. Perhaps 'earthy' would describe her better, for she is also Earth suckling the child Mercury.

Alchemically, the 'cib' in Melchior's name recalls the 'cibation' stage in the Magnum Opus, which is the 'suckling' and results in 'an increase of whiteness and redness, goodness and quantity and a complete laying bare of the variety of colours', before sublimation. The Communion that Melchior (whose name evokes the three Magi) is celebrating is the alchemical



transformation of bread and wine (white and red) into the body and blood of Christ. The sacrament at the altar is the sublimation of the 'red state' and the Christ child is the birth of the Philosopher's Stone.

'Anonymus Sarmata' is identified as Michael Sendivogius the Pole, contemporary with Maier. In Roman times, Sarmatia was the country of the Sarmatians, barbarous Iranian people living to the southeast of Russia.

Cibation – the Earth suckles the child Mercury. After a detail from the frontispiece to Maier's book on Melchior Cibirensis in *Sybola Aureae Mensae Duodecim Nationum*.



Ulstad

The alchemical author of the *Coelum Philosophorum* (The Philosophers' Heaven, Strasburg, 1528), which was published by the same Grüninger who had published Brunswick's *Buch zu Distillieren* (1519) and who shamelessly lifted the woodcuts from Ulstad and from the *Distillieren* for other books that he published later, such as the two versions of the *Summa Perfectionis* assumed to be Geber's (1529 and 1531).

Ulugh Beg (1394–1449)

The man who made Samarkand a centre of Muslim culture and founded an astronomical observatory there, where the sciences, alchemy and philosophy could flourish again after the centuries of disintegration in the wake of Alexander the Great's devastation.

ibn Umail, Mohammad

One of a brilliant group of Spanish-Arab scholars who flourished under the caliphate of Al-Hakam II in Spain (961–976). Mohammad ibn Umail lived in seclusion, but of his works, *The Silvery Water and the Starry Earth* is a commentary on his own alchemical ode, *Epistle of the Sun to the Crescent Moon*. Both were translated into Latin in the Middle Ages, *The Silvery Water* (Tabula Chemica) contains many quotations from earlier alchemical writers and shows how Muslim alchemy accepted and developed Hermetic doctrine. Umail quotes *Sayings of Hermes*, some apparently from Greek originals, others from tenth-century Arabic writings. Ideas from *The Silvery Water* were taken later by the thirteenth-century alchemist Abu'l-Qasim al-Iraqi for his *Knowledge Acquired Concerning the Cultivation*

of Gold. Umail is also quoted by Jildaki, the fourteenth-century metaphysical alchemist from Cairo, in his rich material collected in *The End of the Search*.

Uppsala

An old university town in Sweden and the original capital of the Kingdom of the Sviar: a surprising place for an Arabian alchemist to surface in the seventeenth century, but that is exactly what happened to Avicenna. A Professor in Medicine at Uppsala, Peter Kirsten (1575–1640), wanted to study Avicenna's *Canon* in the original – not being satisfied with the Latin. So he printed part of the *Canon* in Arabic, along with an Arabian grammar for assiduous Swedes to interpret the text.

Uppsala, moreover, was the home of the mystic alchemist, Swedenborg, and to modern times, it continues to promote the Hermetic tradition. In 1985 the university published an

Emmanuel
Swedenborg





important work the occult influences on Shakespeare and other Renaissance men of letters, entitled *Images of Regeneration* and written by Michael Srigley.

Uriel

In the famous scrying sessions of John Dee and Edward Kelley, Uriel is the Archangel who guided Dee in his Operations to summon angels from the celestial spheres.

In the Bible, Uriel is chronicled among the sons of Levi (1 Chronicles 6,24), and of the sons, 121 in all, of Kohath the Levite. His name means 'Flame of God' or 'My Light is God', and in the Book of Enoch he is known variously as one of the four Archangels or one of the Watchers over the World and Tartarus, the Underworld. He shows Enoch the miracles of Heaven and judges over the fallen angels. In the lost Prayer of Joseph, he is the angel that Jacob wrestled with, eighth in rank from God (Jacob being first).

Uroboros

The dragon that endlessly eats its own tail, whose end is his beginning; the monster that keeps the cosmic waters under control; Nahash the serpent, and symbol of the cyclical nature of alchemical work.

Urquhart, Sir Thomas (1611–60)

A dramatic Royalist soldier of Cromarty, and a gentleman and scholar, who was not an alchemist but alchemized language. His unreadable *Ekskubalauron* (*The Jewel*, 1652) is as quixotic and fiery as his translation of Rabelais' *Gargantua and Pantagruel*, the rollicking, enormous aside for which he is justly famous. He was spurred into writing he was *Jewel* when imprisoned by Cromwell's men after the Royalist defeat at Worcester in 1651.

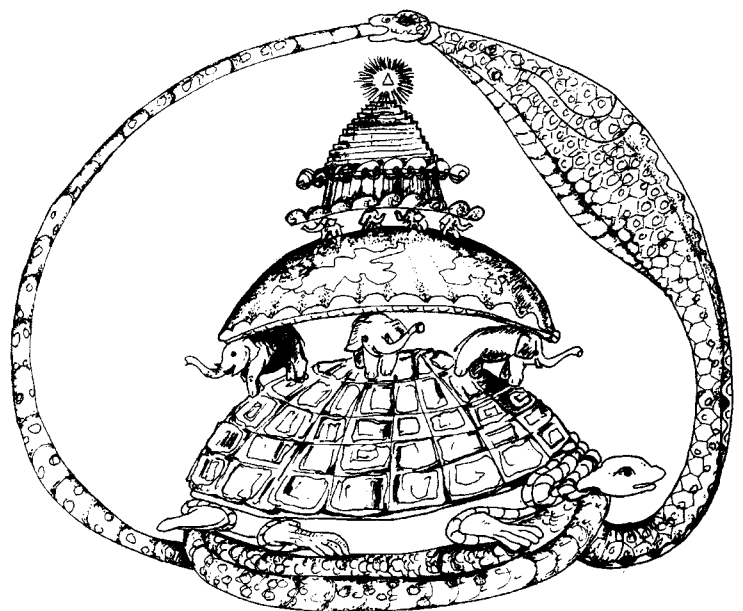
Urquhart's great plea is for a universal language, and his works evince every linguistic contortion to demonstrate this. *Ekskubalauron*

is, as he comments, a 'mungrel' word, deriving from 'ek' + 'skubalou' (Greek for 'out of dung'), and 'aurum' (Latin for 'gold'): Gold out of the Dunghill – i.e. via an alchemical process, the universal language.

As Hugh Miller points out, modern chemical language with all its philosophical ingenuity is constructed on principles exactly similar to the ones Urquhart divulged more than 100 years before modern science constructs had been invented.

Just Rabelais, like Urquhart defies definition. The full title of *The Jewel* is *Ekskubalauron, or the discovery of a most exquisite jewel, more precious than diamonds, enchased in gold, the like whereof was never seen in any age, found in the kennel of Worcester street, the day after the fight and six before the Autumnal Equinox of 1651.*

The tale goes that, exiled in Zeeland, Urquhart died laughing – at the news of the Restoration of Charles II. His aims had been to



In the Indian cosmos, the uroboros is the cobra, symbol of eternity. The mountain represents paradise, the earth below it is supported by elephants, while the dome in the centre is the infernal region supported by the tortoise.



Ursel

restore the fallen Cromarty fortunes, to get rich by inventing a universal language and then to replace Latin with a language that reflected the present structure of the world – without the inconsistencies of existing languages. The possibility of a 'logical and cognitive tool' as a means 'to admit easie and quick entrance to the things themselves' excited a number of philosophers of that century – Francis Bacon, Campanella, Comenius and Descartes, no less.

Sir Thomas Urquhart



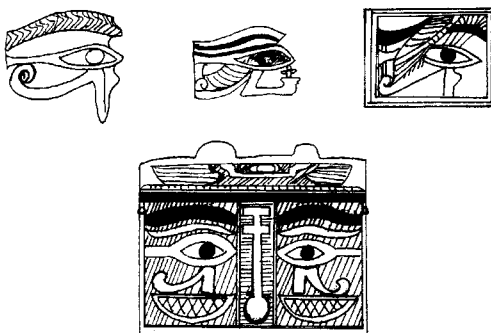
Ursel

a town near Frankfurt, the heart of the 'alternative' book trade in the sixteenth and seventeenth centuries, where the alchemical

publisher, Lazarus Zetzner, first had his printing-house, before he moved to Strasburg in 1613, and where he prepared the first three volumes of his huge anthology of alchemical texts, his *Theatrum Chemicum* (1602).

Utchats

The eyes of heaven, the sun and moon in the Egyptian mysteries. 'Uatcher' originally meant 'the Green Thing', perhaps referring to the woad or to the green malachite applied around the eyes as protection. The lens of the eye focuses green exactly onto the retina. The right eye was associated with Ra, the sun at mid-day, and the left eye was the eye of Horus, or Thoth, the full moon.



Utchats, the Divine Eyes. Egyptian amulets that protected against the Evil Eye.

Utopia

From Greek 'ou' (not) + 'topos' (a place) = nowhere. The original political romance written in Latin in 1516 by Sir Thomas More (1478–1535) – humanist, Catholic and biographer of Pico della Mirandola – and translated into English by Ralph Robinson (1551). Many alchemists dreamed of Utopias, never-never lands and perfect cities, like Plato's Atlantis or Francis Bacon's New Atlantis, Campanella's Citta del Sole (which was round, like the ancient Baghdad), or Andreae's Christianopolis. Rabelais' character Pantagruel



goes to Utopia to defend its inhabitants, the Amaurotes (Greek for 'Obscure Ones') against the invading Dipsodes (Greek for 'Thirsty Ones').

The rumour is that King Henry VIII beheaded More, the alternative Man for all Seasons, because he failed to turn royal horse dung into gold nuggets.

Map of Utopia, after the 1518 Latin edition of the book. The hero is Hythlodatus [Greek 'hythlos' = nonsense] while the chief city is Amaurote [Greek 'amauros' = dim, not easily discovered].

V T O P I A E I N S V L A E T A B V L A .





Vagabond

The word 'planet' in Greek means 'Vagabond'. Plato felt 'the scandal of the planets' particularly. He found it incompatible with divine regularity that there should be 'a parcel of five disorderly vagabonds', especially as the problem of human vagabonds and vandalism had reached crisis-point during his lifetime in Greece.

So Plato set two philosophical problems: first, how to deal with human waywardness, and second, how to deal with planetary waywardness; how to find the 'uniform and ordered movements' that must surely govern the cosmos; how to account for disorder in order. It would upset his astral theology to worship the stars if they could do no better than set the visible example of irregularity.

The planetary wanderer is faintly echoed in Eirenaeus the Cosmopolite's lament for the plight of the alchemist: 'We pass through many nations like vagabonds and dare not assume the care of a family or possess any certain habitation ... I grieve from the very bottom of

The planets. From left to right: Moon, Mercury, Venus, Sun, Mars, Jupiter tumbling, an old man hacking a chunk out of the rock, and Saturn falling into the foreground. (Variation on Kelley's metalline planets in his *Theatre of Terrestrial Astronomy*.)



my soul, that we are driven like vagabonds throughout the earth.'

Valentine, Basil

A real or maybe not-real alchemist of the fourteenth century. Basil Valentine is literally a name to conjure with. 'O nous Basileus,' said Plotinus, 'Reason is still king'. 'Basil' has many connotations, from King to herb; 'basilisk' is the alchemical serpent, the uroboros; 'Basilides' is the Gnostic magus who took the 'negative path' of God-is-not; the 'Basilica' is the circular theatre and oratory where priests had audience, and where Croll set his alchemical treatise. 'Valentine' is brave and courageous, so Basil Valentine remains a magical cognomen of the man who put antimony on the alchemical map.

The man is surpassed by his work. The *Triumph Wagen Antimonii* is a truly great chariot, like the heavenly Kabbalistic chariot, the Merkabah, rumbling across alchemical horizons. Of all alchemical texts, it is among the most important, the most resplendent. It is the first exploration in anything like investigative terms of a metal and its derivatives. *The Triumphal Chariot* could have been based on Alexander von Suchten's *De Secretis Antimonii* (1598) and issued in a later edition by one J. Thölde. *The Triumphal Chariot by Valentine* was printed in German (Leipzig, 1604) along with other works edited by Johann Thölde, the salt-manufacturer from Frankenhäusen, who was thought to be Secretary to the Rosicrucian Order.

Whoever wrote it, the book is a true mixture: part invective against quacks ('wretched and pitiable medicasters'), part experiment with the properties of inorganic and organic chemistry, part praise of antimony ('Antimony is one of the seven wonders of the world'), part praise of the self, and part warning of the dangers of handling antimony. Disarming in style, daring and clever, the words build to Paracelsan heights: 'It is I, Antimony, that speak to you ... In me you find

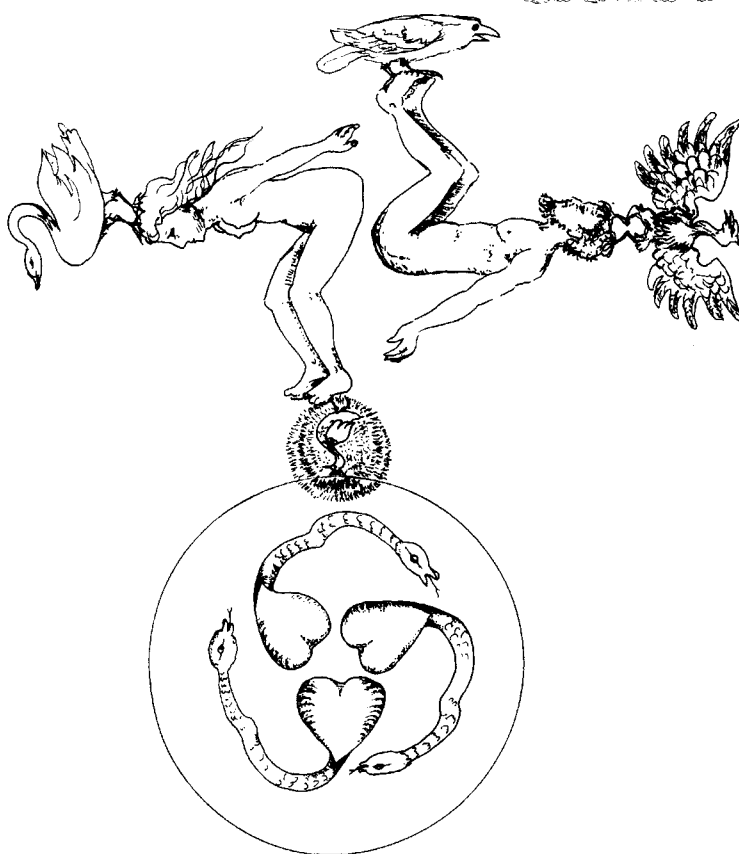


mercury, sulphur and salt, the three great principles of 'health ...' The author gives a very clear account of how to make the Star of Antimony, before descending into alcho-jargon.

Basil's *Last Will and Testament*, his *Twelve Keys*, his *Azoth* and his *Meditations on the Hebrew Letter Lamed* have been collected and half-collected, in the expected editorial jumble. His *Twelve Keys* were issued first in 1599 without the essential accompanying emblems! However, Maier arranged for the emblems and the unlocking *Keys* to be printed in his *Golden Tripod* of 1618 (and 1625, when the *Tripod* was included in Lucas Jennis's *Musaeum Hermeticum*).

The *Twelve Keys* are detailed descriptions of the emblems that represent the preparation of prime matter for the Philosopher's Stone. They are similar to nursery rhyme illustrations that have long-lost meanings. There are two separate protagonists, the King and the Queen, who have quite separate adventures but eventually link. The King (ordinary gold) is 'devoured' by the wolf, antimony, to become purified gold and then the 'seed of gold' (Philosophic Sulphur), which is then used in the process of making the Philosopher's Stone by infusing it with purified silver (Philosophic Mercury). Meanwhile, the Queen (ordinary silver) undergoes her own sacrifice of purification by being heated with Saturn (lead) to become the Philosophic Mercury, which is merged with the Philosophic Sulphur. The royal pair then undergo 'death' – putrefaction – and resurrection.

The most interesting Key is the Ninth, which shows Saturn as Humpty Dumpty having his fall and losing his feathers, or volatility, as the black crow gains supremacy over the eagle. The Moon, or Queen, as Philosophic Mercury, carries the ascendant sign of the white swan. Within the circle beneath her are the three serpents, the principles of Mercury, Sulphur and Salt. Once the Stone is perfected and the King and Queen are in harmony, as in the Eleventh Key, it must be fermented with gold before it can be used in projection for the



production of new gold. On the principle of like with like, the Twelfth Key shows the potentizing process taking place.

The *Twelve Keys* have remained popular throughout the centuries and have been re-edited in the twentieth century by the alchemist Canseliet.

The Ninth Key of Basil Valentine.

Van Helmont, Jan Baptista (1579–1644)

The scientist who gave a name to 'gas', as he saw and pronounced it as 'chaos' in Flemish. This is the man who studied willow-trees in his garden and transpiration of plants, and guessed at chlorophyll. In his belief that water was the origin of the elements, he went back to the Presocratic Greeks, yet this was more forward-looking than he realized. This 'sceptical chemist' got into trouble with the



Vaughan, Thomas

Title-page for Vaughan's *Anthroposophia Theomagica*, his earliest work on magic and alchemy.

Inquisition when he tried to explain away the 'magic' of relics and miracles. And yet he had to believe the 'miracle' of alchemical transmutation, for he was one of those who had a visitation from a stranger who left him some saffron-coloured powder to project onto mercury in a crucible. Van 'Doubting' Helmont had to witness that it worked! He opened the lid of the crucible to find a lump of gold of the

exact weight that the mercury had been. He describes the whole event with scientific exactitude in his *Ortus Medicinae*.

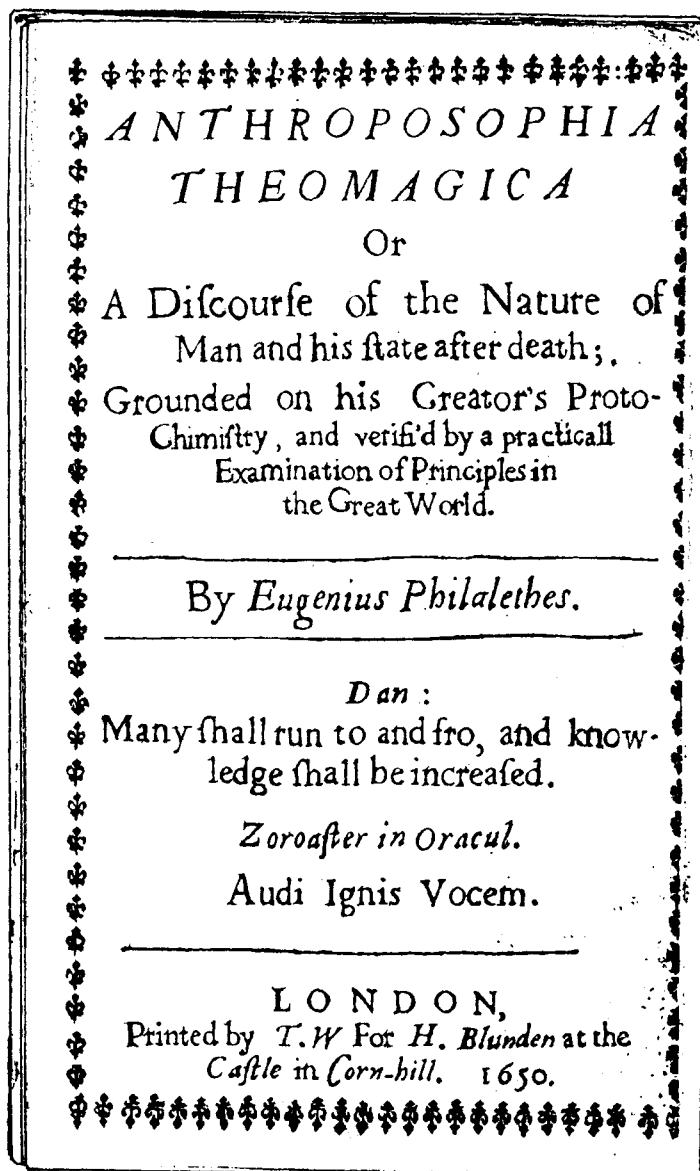
Vaughan, Thomas (c. 1621–65)

The twin brother of Henry Vaughan the Silurist poet, this timid spiritual alchemist was born in the parish of St Briget, Newton, and later took refuge in Jesus College, Oxford, for ten years, to escape the Civil War. Vaughan was a great Welsh mystic, bookish rather than practising the Art. He took on the name 'Eugenius Philalethes' out of respect for his great Hermetic Master, Eirenaeus Philalethes, whose work he translated as *Three Tracts of the Great Medicine of Philosophers for Humane and Metalline Bodies* (published in its first English edition in 1694).

Although he lived before the appearance of the *Kabbala Denudata* brought Jewish Kabbalah into the open, he was fascinated by Cornelius Agrippa, and his *Magica Adamica* (1650) is a history of magic. However, Vaughan had not read much else by 1650 than the *Occult Philosophy* and the *De Vanitate*. Through these works he contemplated Kabbalah, particularly the image of Jacob's Ladder ascending to God, as opposed to the eternal rotations of the Hebrew alphabet, which did not lead up but only round.

Vaughan saw alchemy as both spiritual and physical science, extending in scope from infinity to the mineral kingdom. He had a mystical concept of the sephiroth: 'the first is a Spirit, the second is the Voice of the Spirit, the third is a Spirit that comes forth from the Spirit and the Voice.' He confessed in his preface to his translation of the Rosicrucian manifesto, the *Fama Fraternitatis*, that he knew nothing of the Rosicrucians first-hand, any more than he did of Kabbalah.

Gradually, Vaughan came into his own. His spiritual path led him beyond Cornelius Agrippa and the *Aesh Mezareth* (Book of Purifying Fire) as is reflected in his *Euphrates* (Waters of the East) in 1655. He was more of a



Christian mystic than Kabbalist. He was full of ideas, rather than practices, about the alchemical 'torture of metals'.

Vault

Vaults had a spiritualizing effect on man, an 'envoûtement', a raising of vibrations. Christian Rosencreutz was buried in a very elaborate vault, whose proportions parallel those of the Great Pyramid and the Temple of Solomon. Trdat, the Armenian architect (998–1001) of Ani Cathedral, designed pointed arches and vaults that anticipated European Gothic by a century.

Villanova, Arnau de (c. 1235–1312)

His life is a question-mark: was he born in Milan, Montpellier or Catalonia? Did he seek refuge with Frederick, King of Naples? Did he die in a storm at sea? Were his books burned posthumously by the Inquisition of Tarragona in 1316? What is his value as an alchemist? He is oft-quoted, but what were his works, which grew in popularity after they were reprinted at

Leyden in 1520, 1532 and elsewhere in 1585 and 1613? They emerged now and then until 1742, when a selection in German appeared in Vienna, in 11 tracts. Villanova's heterogeneous mish-mash recurs in nearly all the volumes of Zetzner's *Theatrum Chemicum*. It seems that it is the proverbial nature of his utterances that appeals – 'Life conceives life' and 'nature conquers nature'. However, one of his works was serious enough for Manget to include in his *Bibliotheca Chemica Curiosa*. That is Villanova's *Semita Semitae* (The Narrow Way of the Narrow Way), in which he says that the foundation of the Art is Solution, the reduction of the particular body, whether copper or other metal, into Mercury; this is the reduction into water that adepts refer to; the second secret of the Art is the manifestation of earth out of water; the third, which is 'purification', is Putrefaction, to combine moist and dry; the fourth is Ascension, which 'aerifies' the earth, after which is the sublimation by fire. The sublimation 'brings forth a spirit, which is said to be Mercury'. The sublimed or calcined earth sinks to the bottom of the vessel, but it contains the spirit of mercury, the 'seed'. A ferment is added to this 'seeded earth' and it receives a 'Soul for the perfection of the Mastery'.

Vincent of Beauvais (c. 1190–1264)

A respected Christian philosopher and translator, whose two encyclopedias were among the most popular sourcebooks for alchemists of the fifteenth century day: *Speculum Naturae* (Nature's Mirror, Strasburg, 1465) and *Speculum Quadruplex* (The Fourfold Mirror). These works contain a mass of quotations from Islamic writers such as the al-Qazwini encyclopedists, who paved the way for Europeans.

Vithoulkas, G. (twentieth century)

One of the most charismatic modern homeopaths, who came from Greece in 1978 to

Vithoulkas, G.



Mercurius



Vivarium

lecture in California, where homeopathy was virtually dead.

Like Frater Albertus, the mid-twentieth century alchemist, he saw all phenomena as threefold, with body, soul, and spirit, which correspond to the alchemical salt, sulphur and mercury.

Vivarium

'The House of the Living', the monastery that Cassiodorus in his old age founded in his beloved native Squillace, Italy, by the Ionian Sea. Flavius Magnus Aurelius Cassiodorus (c. 490 – c. 585), the sprightly scholar who wrote a Grammar when he was 93, had been, like his kinsman Boethius, a minister to Theodoric the Great, and had lived on the knife-edge of Ostrogothic politics.

At length, after the upheavals of Gothic rule, and the ultimate capture of Ravenna for Justinian by Belisarius in 540, Cassiodorus was

able to retire to his birthplace and found his 'Vivarium'. Essentially systems-oriented (he had, after all, headed the whole team managing the public system of Imperial Rome under an alien king), Cassiodorus now wanted to put in place his own system of preserving and perpetuating his Latin culture. So, with far-reaching vision, he embarked on his Magnum Opus: his Scriptorium or school for studying and copying the Classics, and his Monastic School, or school for preparation into the religious life.

The Scriptorium produced the last really massive library of the ancient world. The list of books that Cassiodorus prescribed in his *Institutiones* was quite liberal: not only the usual religious works of St Ambrose, St Augustine and St Jerome, but also the Roman historians Livy and Cicero, and the poets Ovid and Virgil. Although the monastery and most of the library did not survive Cassiodorus for long, at least some of the classical masterpieces were taken to Rome, and this way reached the Renaissance alchemists.

St Ambrose



Voarchadumia

A book on the Kabbalistic science of metals, the full title being *Ars et Theoria Transmutationis Metallica, cum Voarchadumia Proportionibus, muneris et iconibus rei accomodis illustrata* by Joannes Augustinus Pantheus, a Venetian priest.

John Dee was given a copy on 18 January 1559. It was nothing special in the literature of alchemy – i.e. almost unreadable – except that it showed an Enochian alphabet. It had been published in Venice (April 1530), in Paris (1550) and in more reader-friendly reprints in Lazarus Zetzner's *Theatrum Chemicum* (1613 and 1659).

There is a definition in Martin Ruland's *Alchemical Dictionary* (1612) of Voarchadumia as a branch of 'alchemical metallurgy' to do with 'auriferous metallic veins' and 'the intrinsic fixed form and the natural yellow colour of gold', and the nature of the

Philosopher's Stone as a 'heavy, corporeal, fixed, fusible, ductile, tinged, rarified and arcane substance of Quicksilver or Mercury'.

Vok, Peter

.....

The last in his line (since the death in 1592 of his brother Vilem) of the noble Rozmberk family. A fiery occultist in the Bohemia of Rudolph II, the founder of anonymous secret societies, and the husband of a woman of unsound mind.

All this added to the hysteria of his wild

summer gatherings at his palace in Kratochvil and his secret sessions at his castle in Bechyne. At loggerheads with Rudolph, he yet had similarities: he packed his castle and palace with alchemical wanderers – Dee, Maier, Tycho, Anhalt – and religious fanatics of wavering faiths and uncertainties.

Finally, in order to escape the snares of Rudolph, he traipsed to Trebon with 23 chests full of alchemical and occult books – whither he was followed by the drop-outs from all Europe who tramped the road between Prague and Vienna!

Vok, Peter





Waite, Arthur Edward (1857–1942)

A Victorian supersaurus of occult learning, whose wily writings well repay the effort needed to decipher them! In an age before microfiches, computers and faxes, his library documentation of alchemists and Kabbalists shows meticulous accuracy and combing of original texts. His favourite words are those of the sceptic: pseudonymous, concatenation, putative, myrionymous, supposititious and reveries.

According to Wynn Westcott, he was a rather tricky man to live with, cantankerous and demanding, but considering the fiddly nature of his research, perhaps he can be forgiven. He was born in Brooklyn, New York, on 2 October 1857, the illegitimate son of a ship's captain from Connecticut, and Emma Lovell, 'an educated Englishwoman'. He was brought to England, to a Roman Catholic upbringing of genteel poverty and Penny Dreadfuls. There he then became interested in the occult and began to design his own tarot cards.

For six months Waite was a member of the Hermetic Order of the Golden Dawn, but he was disturbed by their quarrels. He moved from magic to mysticism.

His phenomenal output is evidence of his diligence. His annals of Rosicrucianism, freemasonry, Kabbalah and the continuum of Hellenistic, Byzantine and Latin Alchemy are punctiliously detailed. He is honest enough to admit anything that is guesswork and is gracious enough to be ashamed of his own youthful inaccuracies (as with his *Lives of Alchemists*, written well before his classic *The Secret Tradition in Alchemy*).

His Hermetic works are voluminous: he edited the works of Paracelsus, Thomas Vaughan, Raymond Lull, Martin Ruland,

Edward Kelley, the *Turba Philosophorum* and *The New Pearl*. He has secured the admiration of Jewish scholars for being the only gentile of his era to produce works of such standing as his *Holy Kabbalah* and his *Secret Doctrine in Israel*.

In the field of alchemy, he deals with utmost thoroughness with the European tradition from the thirteenth to the seventeenth centuries, his dry humour not missing a single nuance of quackery or eccentricity. He well knew about the Arabic and Syriac manuscripts in 'considerable numbers' in the libraries of Europe that 'have been imperfectly explored', but he was the first to admit his limitations, having 'neither the opportunity nor the qualifications for undertaking such a task'. So he leaves out anything Middle Eastern, Indian and Oriental or from further afield that has not been transmitted to Europe. But modern scholarship has still not ploughed these fields, except for a little around the edge.

Dame Frances Yates's remark (in her *Rosicrucian Enlightenment*) that 'Waite's valuable work is marred by lack of critical sense' is hardly fair, for Waite was the first to check the 'uncritical methods' of 'several writers', and, as he said, he looks 'critically and historically' not only at Rosicrucian symbolism, but at all occult symbolism.

One thing mars this cobweb-sweeping colossus: his poems. Obscurity could be forgiven in him; doggerel not. They are best left unread.

Weigel, Valentin (1533–88)

A Lutheran mystic and Paracelsan alchemist, who was in the German magical tradition of Trithemius and Cornelius Agrippa. He preached his ideas on Sacred Harmony rather too ardently for his co-religionists. His works circulated widely in manuscript, but when they were published posthumously in the seventeenth century, they were banned in Saxony although some of his sermons ended up in archives in Prague.

F

OUR WINGED CREATURES



In alchemical allegory, creatures with wings represent the volatilizing (flying up) of metals on the physical plane, and the ascending of spirit (transcending) on the metaphysical plane.

1 THE PHOENIX, alchemical symbol of the sun, transforms and renews itself by fire. It builds its own funeral pyre, and sets fire to itself by turning its body to the sun and flapping its wings. After this self-immolation, it rises from its ashes on the ninth day.

*Appliqué:
Diana Tovey-Khan*

2 THE DRAGON links with the mercurial serpents of healing (the caduceus), the uroboros and the salamander, representing destruction and renewal by fire. In China there were sea-dragons too, distinguished by five claws on each foot.

Embroidery: MLM Williams



3 THE EAGLE generally stands for mercury. Stationary, it represents sublimation or fixing the volatile, while the flying eagle volatilizes the fixed. The alchemical eagle connects with Ashur the Assyrian eagle-god (whose crest is depicted as worn by the alchemist Ostanes), with Horus the Egyptian sun-god, and with the eagle-face of the creatures who bear the heavenly chariot in Ezekiel's vision. See Xerxes and Yorede Merkabah.

Chamoletting: Diana Fernando





4 PEGASUS, sprung alchemically from the blood of the snake-headed Medusa, symbolizes energy on every level (horse-power) and passions to be bridled. With his mythical rider, Bellerophon, Pegasus tamed the monstrous Chimaera by thrusting lead down her throat, and with a stroke of his hoof, he transformed the Stone on the top of Mount Helicon, releasing the fountain of the Muses. In cabalistic alchemy, Pegasus is Peg – us,

the pack-horse or kaballès, bearer of weighty secrets from this fountain, particularly the sacred art of poetry which is the secret art of alchemical language, cognate with cabala, the language of horse, cheval, chivalry. To the initiate who understood Pegasus' language, access was granted to unknown regions across time and space.
Painting: Michael Bramman





Westcott, Dr Wynn

Westcott, whose pseudonym *Sapere Aude* means 'dare to be wise', was another important Victorian antiquarian who held up the Hermetic pillars in his *Collectanea Chemica* in the 1890s. Parallel to A.E. Waite, G.R.S. Mead and Eliphas Lévi, he helped pave the way for modern scholarship in Babylonian, Jewish, Greek and Renaissance alchemy and cabala. He discovered the ancient Indian art of *chaturanga* (chess) and devised his own chessmen and Enochian chess-game with occult parallels to the Indian and Egyptian games.

He unearthed the *Chaldean Chronicles of Zoroaster* as well as Everard's 1650 translation of the *Divine Pimander*. He presented to the late nineteenth-century English public what Berthelot was presenting to the French – revitalized occult texts.

Westminster, John Cremer, Abbot of

Mentioned among Maier's English alchemists in his *Twelve Heroes*, Cremer figures as one of the triumvirate of Maier's *Golden Tripod* (Jennis, Frankfurt, 1618).

One tradition has it that this self-styled Abbot of Westminster was a Benedictine, initiated by a Ramon Lull who worked with him in Westminster Abbey and the Tower of London in 1311. A certain Robert Constantine affirmed in 1555 that he had been shown a coin of very pure gold, under the name of a Raymond noble, which had been struck from the precious metal manufactured in the Tower of London. A.E. Waite thinks that both Lull and Cremer are masks, although there is something behind the story of Cremer.

The title-page of Cremer's *Testament* presumably depicts the author, yet the illustration from the very same plate of 1618, by the same firm, bears the title 'Thomas Aquinas the Italian' in the 1624 printing of Stolcius's *Viridarium Chemicum*!

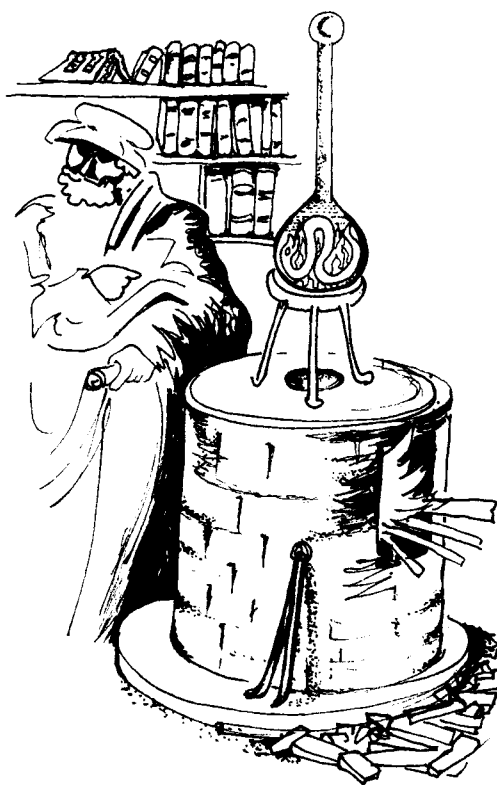
The *Testament* is only a few pages long. Cremer says he wasted 30 years reading



unintelligible alchemical writings before being acquainted with 'Master Raymond' in Italy. Here and in England, during a two-year stay, Raymond disclosed to him the whole secret of the Great Mystery.

Cremer's *Testament* purports to describe the preparation of the 'living water which

Ancient Egyptian lion and unicorn playing a chess-like board-game. After a satirical papyrus, New Kingdom (1567–1085BC).



John Cremer, Abbot of Westminster, by his alchemical oven and tripod bearing a Hermetic vase.



William and Mary

constitutes the life of our Art'. There is a recipe using 'orange-coloured arsenic and Rabusenum', which could be chalybeate waters. Alchemists who worked under the auspices of Taurus, when the Magnum Opus should be completed, were attracted by all red materials.

In 1652, Ashmole published an engraving, apparently representing a hieroglyph that Cremer caused to be painted on an arched wall within the Abbey. Ashmole records that he:

met with it Limned in a very Ancient Manuscript ... In it is conteyn'd the Grand Misteries of the Philosopher's Stone, and not more Popish and Superstitious than Flamell's Hieroglyphicks portraied upon an Arch in St Innocents' Churchyard in Paris. Notwithstanding, it has pleased some, to wash the Originall over with a Plasterer's whited Brush.

William and Mary

The royal couple who made a declaration about the desirability of studying alchemy. In view of the Bank of England being founded in 1694 to look after the Government debt, it seems hardly surprising. The desperate androgyne William-and-Mary said the alchemical gold must be turned over to their Majesties' Mint in the Tower of London.

Winthrop Junior, John (1606-76)

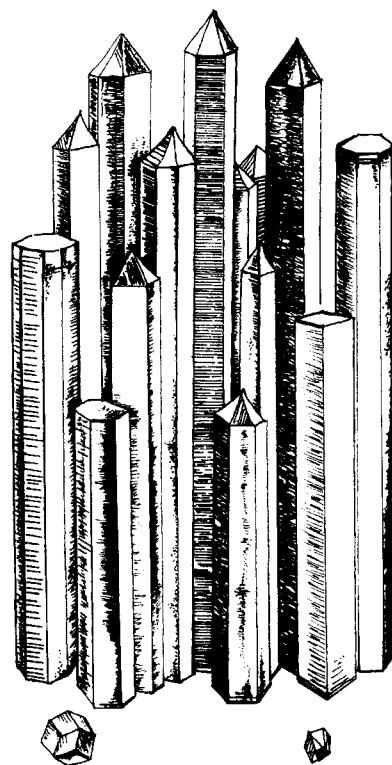
The son of the English John Winthrop, who was portrayed in Hawthorne's *The Scarlet Letter* and who led the Puritan exodus to America.

John Winthrop Junior became the first governor of Connecticut and a great astronomer and alchemist. Following the Paracelsan tradition of iatrochemistry, he was famed for his medical practice, and was honoured as a member of the Royal Society in London.

After a drawing by Konrad Von Gesner of prismatic rocks in Bohemia – one source for Rudolph's precious stones.

Wunderkammern

The 'Miracle Halls' or museum showrooms in the Palace in Prague of Rudolph II. In his craving for the sensational, the alchemical and the sublime, Rudolph surrounded himself with all kinds of exotica, crystals, lumps of gold, fossilized reptiles, magic mirrors, grimoires and gemstones, bezoars and gallstones, boxes for lovers' pierced hearts, nodding statues and a handful of the clay from which God made Adam. Paintings by Bosch and Arcimboldo looked down on Rudolph's chained lion, which prowled round his ante-chamber; gallows-ropes swung, sundials shone and robots crunched and revolved. Rudolph was so keyed up to the 'otherworld' that most nights he would ring a giant bell made of electrum magicum to summon protective spirits, according to the tradition of Paracelsus and Trithemius. He quaked in fear of the astrological forecast of a death worse than his cousin Henry III's (who died from a monkish stab-wound).





Xerion

It is these ideas, by way of Aristotle, that find their way into the *Turba*. Aristotle adopted – and adapted – the views of his predecessors Xenophanes, Empedocles and Plato and crystallized them in his theory of the four elements. Of the two pairs of contraries, air and earth, fire and water, he considered the latter to be more significant. All of them he saw as interconvertible and all of them came from *prima materia*, primordial matter. One 'body' could change into another by altering the proportion of the elements present. All nature was striving for perfection – a notion that was directly in tune with the alchemical concept that metals pass through a cycle of growth, until they reach pure gold.

Aristotle's ideas remained surprisingly intact as they passed through the ages, in the hands of the Alexandrine and Byzantine alchemists, then the Arabian and Latin medieval scholars, finally coming out through the mouth of the Xenophanes of the *Turba*: 'EN TO PAN,' he postulates again, although this time he applies his 'One is All' to the alchemical process of Putrefaction, and stresses the importance of the four elements being together.

Xerion

Greek 'dry powder for wounds', translated to 'el-ixir' by the Arabs.

Xerxes I, King of Persia

(c. 519–465BC)

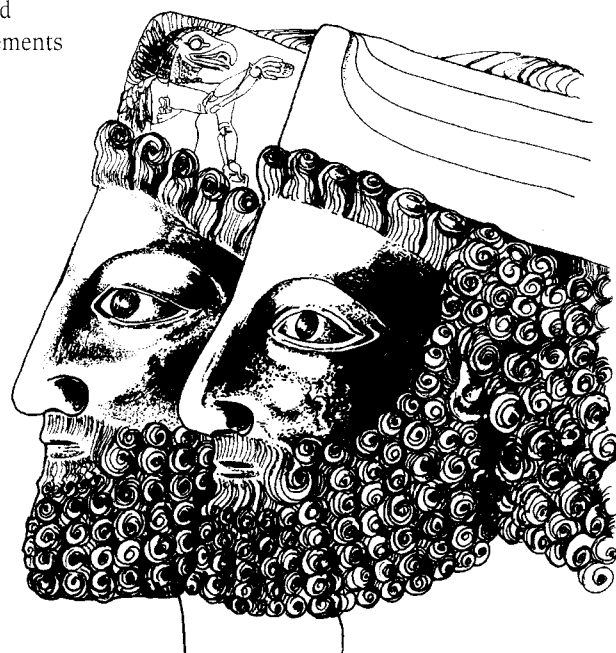
The great king under whose reign alchemy, astronomy and magic flourished. He was accompanied by the alchemist Ostanès in his wars with the Greeks, and defeated at Salamis in 480BC. It was Ostanès who had had the dream that the Gods demanded war on the Greeks, and Xerxes who had taken the decision to fulfil it.

Ximenes, Cardinal Roderigo of Toledo (thirteenth century)

The first person in the West to write a *History of the Arabs*, published in 1625 in Leyden, where the cocooned north Europeans realized at last that there had been, right through the European Dark Ages, highly cultured Arabian scholars, alchemists and scientists, not only in the Middle East but also on their doorstep in Spain. Arabian sages had been known to a small circle of Western adepts, but Ximenes' *Historia Saracenica* had hitherto only been available in manuscript.

Xiphilinus

A philosopher named by Edward Kelley in Chapter the Thirteenth of his *Theatre of Terrestrial Astronomy*, concerning the 'Perfect Red Elixir'. 'Xiphilinus and the rest of the philosophers agree in this,' says Kelley, 'that the white colour must precede the red.'



Xerxes (on right) with Ostanès who has on his head-dress the eagle-headed winged deity Ashur.



Yellow Emperor's Book of Medicine

The *Nei Ching*, whose very title suggests medical alchemy, goes back to 200BC, if not perhaps as far back as 2600BC when the mythical emperor is said to have been alive. The book relies on a whole system of correlations between the 'universal quintet' of elements: water, fire, wood, metal (gold or cinnabar) and earth, and the main organs of the body. All this is firmly entrenched in Tao as the supreme regulator of the universe.



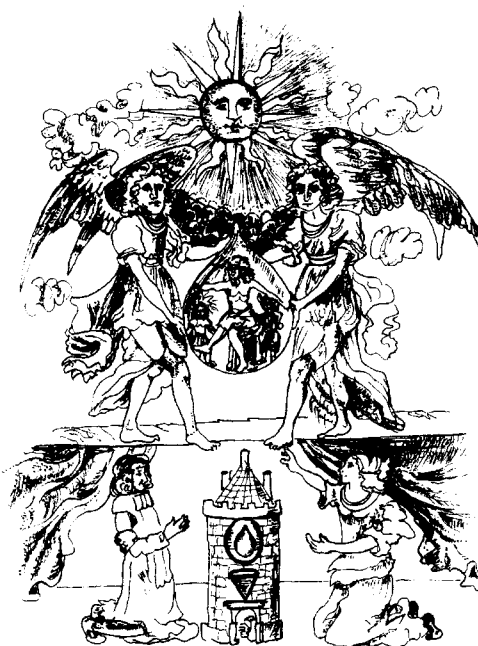
Huang Ti, the legendary Yellow Emperor, founder of the art of healing.

d'Ygé, Claude (twentieth century)

A French alchemist and pupil of Canseliet and the strange circle around Fulcanelli, d'Ygé is totally devoted to laboratory and oratory working in harmony, indispensably together.

Yi King

More familiarly known as *I Ching* (*The Book of Mutation*), this is imbued with alchemical symbolism, particularly the Hermetic hexagrams with the notion of 'above' and 'below', and the change from 'yin' to 'yang' – female to male, volatile to fixed.



Most cultures had their *Book of Change* or *Book of Transformation*. Here, the process of conjunction (gold and silver united by sublimation) is allegorized as a marriage blessed by angels. (Variation on a plate from an eighteenth-century *Book of Change*.)

Yliaster

Prime matter, consisting of body and soul. The word appears in Paracelsus's philosophy of the creation and fruitfulness of the four elements. Having stated how the world is god-created from the four elements and founded on the three principles of salt, sulphur and mercury, Paracelsus describes how fossils are concealed in wood:

Accordingly, the first body, the Yliaster, was nothing but a clod which contained all the chaos, all the waters, all minerals, all herbs, all stones, all gems. Only the supreme Master could release them and form them



Yochai, Shimon ben

with tender solicitude, so that other things could be created from the rest.

Probably, the word is one of Paracelsus' port-manteau words: 'hyle' (matter) + 'astrum' (star), the two basic compounds of the cosmos, matter representing 'below', and the stars, 'above'. Yet of Paracelsus's variants of 'Yliaster', 'Iliadus' suggests an epic pun – the heroics of a journey like the Odessey, the other great epic. See Prima also Materia.

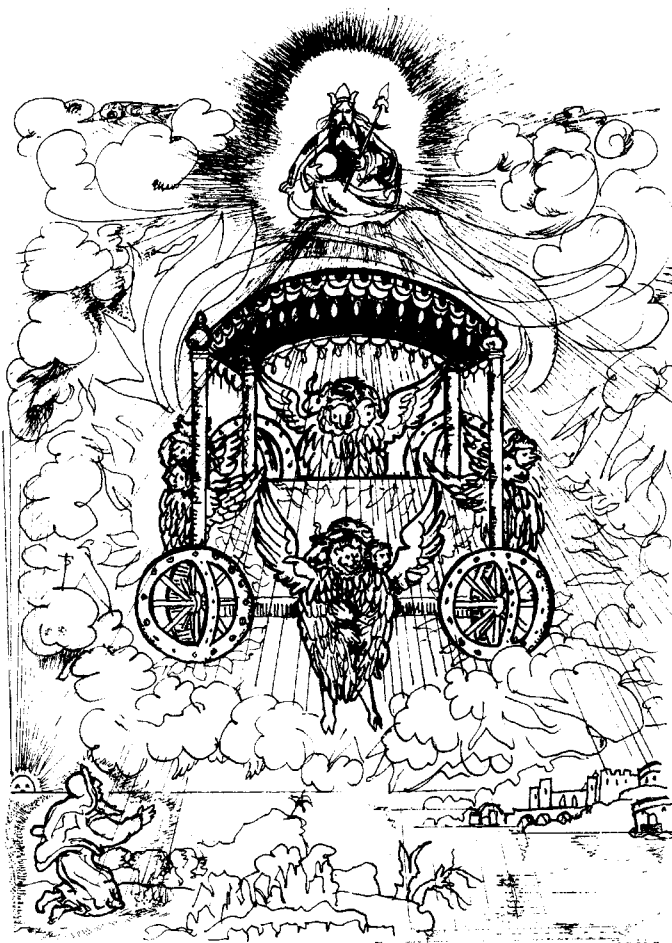
Yochai, Shimon ben (second century AD)

A romantic Rabbi from Palestine, a Jewish 'jongleur' who spent 12 years in a cave incubating the Kabbalistic *Zohar*, according to Moses de León, who was writing in the thirteenth century. Moses wished the *Zohar* to have the aura of antiquity, but is himself a far more likely author of the *Zohar*. Rosenroth regarded Yochai as the author of the *Siphra di Zenioutha* (Book of Concealment), which he saw as the oldest part of the *Zohar*. Someone else who believed in Yochai as the real composer of the *Zohar* was Andreas Norrelius, writing from Amsterdam in 1720. His little pamphlet on the Christian aspects of the *Zohar*, the *Phosophorus Orthodoxae Fidei Veterum Cabbalistarum*, has a preface in praise of Yochai, showing the authority of the *Zohar* since its author was older than Judah the Prince. The Talmud is quoted to prove that Yochai studied Kabbalah in a cave and that he and his son wrote the *Zohar* there in the local Jerusalem dialect.

Yorede Merkabah

The heavenly chariot-ride, a mystic state, experienced by the Jewish ascetics chiefly of the Geonic period, and described in the literature of the Hekaloth (the Heavenly Halls). The mystics, by prayer and fasting, would experience the 'heavenly chariot-ride' through the seven Heavenly Halls, seeing with their own eyes all therein, even in the seventh Hall, visions of the ineffable Jahveh. The ascent to the heavenly spheres represents moral regeneration and transformation.

Yorede Merkabah. In Ezekiel's vision, the heavenly chariot is supported by four living creatures, each with four faces (eagle, ox, man and lion), four wings, and 'straight feet' but cloven like a calf's.





Zachaire, Denis (b. 1510)

Something of an alchemical playboy, whose family poured money to bottomless perdition after him, this vagabond student, born of a noble family in Guienne, was educated first at home, then at Bordeaux College of Arts. His tutor, an alchemist, inspired Zachaire to pursue the Hermetic Art rather than his chosen subjects. So he started collecting foldersful of alchemical recipes, and moved with his tutor to Toulouse. There they set up a laboratory, full of retorts and metals, which rapidly ran through Zachaire's allowance. A rather sorry fate befell the tutor: death from the plague or at least from the unhealthy fumes in the room!

Undeterred, Denis fell in with a local abbé, who had a recipe for achieving the Magnum Opus. They got it underway, and after several months of preparation, the hopeful abbé told his monks that all they needed to do was melt down the big lead fountain in the cloister garden and it would be transformed into gold the moment his experiments with Zachaire were complete.

It seems that Denis quietly disappeared before his reputation was tarnished. He turned up in Paris, where other alchemists used to gather in the porch of Notre-Dame to chat about alchemy. His picaresque encounters took Zachaire through an endless queue of quacks. He finally came to rest among the books of Lull and Villanova. From then on, he took alchemy seriously and writes in the last pages of his autobiographical *Treatise on the Natural Philosophy of Metals* of his plans to sell up and to move with his new wife and his cousin to Germany and devote himself to 'The Art'.

The corollary to this tale was added by one Mordochaeus de Nelle, Rudolph II's aspiring assistant in the secret royal alchemical laboratories: Zachaire's cousin strangles him and runs off with his wife!

Zerotin, Karel

A restless, tragic Utopian, this friend of the pansophist Comenius embraced the 'alternative' lifestyle of the seventeenth-century Hapsburgs, whether political reform, or spiritual, educational or alchemical transformation. Karel belonged to one of the several powerful families that webbed the Bohemian secret networks stretching from The Hague to Heidelberg and Prague.

Interested in Universal Mysteries and the ideal states of the Ancients, he was recipient of Typotius's *De Hieroglyphia*, a kind of alchemico-emblem book of the sort that Rudolph's team of antiquarian-cum-laureates concocted for his glory. Karel Zerotin cut a fatalistic figure, thrice-widowed, attacked for his unorthodox ideals and torn between friends of too Catholic or too Calvinistic loyalties.

Zetzner, Lazarus (seventeenth century)

A major publisher of anyone who was anything – dead, fictitious or alive in the alchemical world. Being Jewish, he was unlikely to be suspected of Christian unorthodoxy, so he published the Rosicrucian Andreae's *Chymical Wedding* (Strasburg, 1616) and Andreae's *Christianopolis* (1619), the Utopian dream state. He published works attributed to Lull, with Bruno's *Commentaries*, in his huge *Theatrum Chemicum*, the most ambitious alchemical compendium of his and his children's generations.

The first three volumes appeared in 1602, while Volume IV was published in Strasburg after Zetzner had moved his business from Ursel in 1613. In this, appeared Sendivogius's *Novum Lumen Chymicum* and the *Voarchadumia* in more palatable format.

Volume V (1622–4) was compiled posthumously by his family, and all five volumes were reprinted in 1659 and 1660. Chorus-ing his way through most of these is the oft-quoted alchemist, Arnau de Villanova. Volume VI appeared in 1661, composed by the diligent German theosophist Johann Jacob



Ziggurat

Heilmann of Zweibrücken in the Palatinate, who, with only one assistant, translated into Latin works filling over 770 pages.

Ziggurat

Derived from the Assyrian 'ziquqratu'. A pyramidal tower in ancient Mesopotamia used for astrological divination and alchemical transformation. Sophisticated civilizations of Babylonia built ziggurats using 'composites': kiln-dried bricks set in bitumen reinforced at every fifth course with layers of fibrous reeds. The ziggurat in myth has been widely used as the Tower of Babel, or the hill of the Castle of the Holy Grail, or even the Palace of Prester John, the priest-king of the Sabians of Harran. The left-fold path of the Moon and of Magic is reflected in the widdershins steps or ramps up to the top of the ziggurat.

This spiral minaret at Samarra connects Islam with the ziggurats of Assyria and Babylonia. The seven ascending counter-clockwise 'windings' are for the seven planets' celestial orbits.



Zikr

The equivalent of a mantra in intellectual Sufism. It is the way of repeating the name of God (Allah) through chanting and moving the body, often for many hours at a time, to become the Perfect Man in both body and mind, on the path of spiritual alchemy as orchestrated by the philosopher Algazel in his *Proof of Islam* and by Al-Suhrawardi, the mystic alchemist put to death at Aleppo in 1191 for the ideas he revealed in *Hayakil al-nur* (The Temple of Light).

Illustration after Ziletti's 1557 edition of the *Pretiosa Margarita Novella*. The crowned king, Gold, gives audience to five metalline servants (Lead, Tin, Iron, Copper, Silver) and his son, Mercury.



Ziletti

The publisher of an edition in 1557 of the exquisite *Pretiosa Margarita Novella* (The Precious New Pearl) that had made the typesetter Aldus Manutius famous in 1546. Ziletti incorporated his device on the title-page and reprinted Aldus' first eight leaves. Apart from that, Ziletti's edition is exactly like the Aldus one.

The *New Pearl* was compiled in 1330 by Petrus Bonus of Pola and beautifully typeset by Aldus 200 years later. The book is an alchemical anthology from the works of around 20 earlier alchemists – real or imaginary. Foremost among the references are 70 quotations from the Persian Rhazes and 30 references to the supposed Geber's *Summa Perfectionis*, and an equal number to the *Turba*

Philosophorum, in which a company of philosophers have an alchemical debate presided over by Pythagoras. The *New Pearl* is an uncritical medley of 'authorities' – including Arnau de Villanova, Ramon Lull and Michael Scot. It puts forward the principles of alchemy, the pros and cons of the Art, the nature of metals and the Stone. Fourteen of the remarkable woodcuts show the Magnum Opus in allegorical form, up to the Crowning of the King (gold) with his entourage of crowned Princes (the lesser metals).

Zinc

The word itself was possibly a Paracelsan expletive; it was certainly a portmanteau invention: 'zinne' (tin) + 'kupfer' (copper).



Paracelsus

Paracelsus gave the name Zinc to the element he reputedly discovered because of the properties it appeared to share with both tin and copper.

Zincgreff, Julius Guglielmus (seventeenth century)

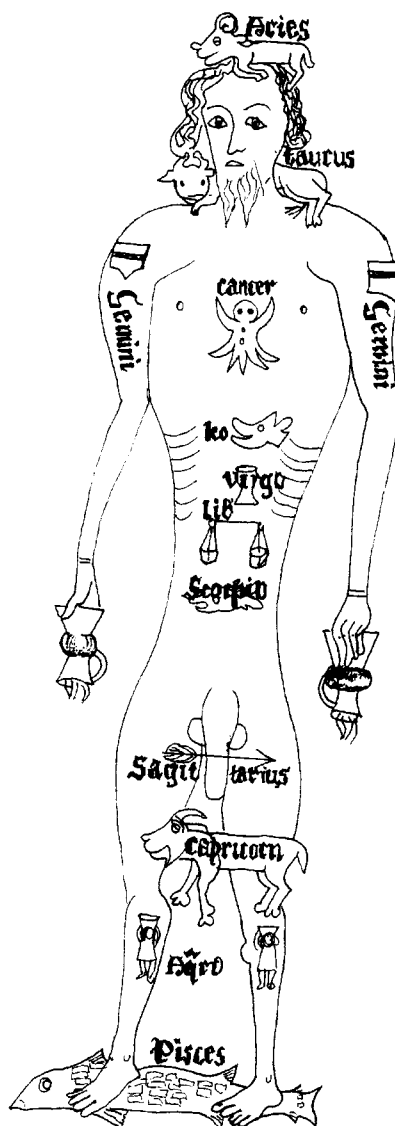
Compiled a book of ethico-political sayings, which were transformed by Matthew Merian's engravings into a magical wonderland, featuring Heidelberg Castle and the young Palatinate couple, Frederick V and Princess Elizabeth, daughter of James I of England. Zincgreff's *Emblematum Ethico-Politicorum* (1619) was published by the great Rosicrucian sympathizer, Johann Theodor de Bry, who had been busy publishing Fludd and Maier. Although Zincgreff's intentions were more politically oriented towards saving the Palatinate than Maier's, inevitably the book

was transformed in the hands of such a team as Merian and de Bry into an alchemical emblem-book, with Atalanta characters fuguingthrough.

Zodiac

Literally 'little animals' in the sky that correlate with all the planets and all the kingdoms. It was essential to consult the zodiac before embarking on any alchemical Operation.

Zodiac



Zodiac-man. The parts of the body were thought to be governed by the various signs of the zodiac. Different diseases were specific to the different decans. Stomach problems, for instance, were indicated in the first decanate of Virgo. See also Decans.

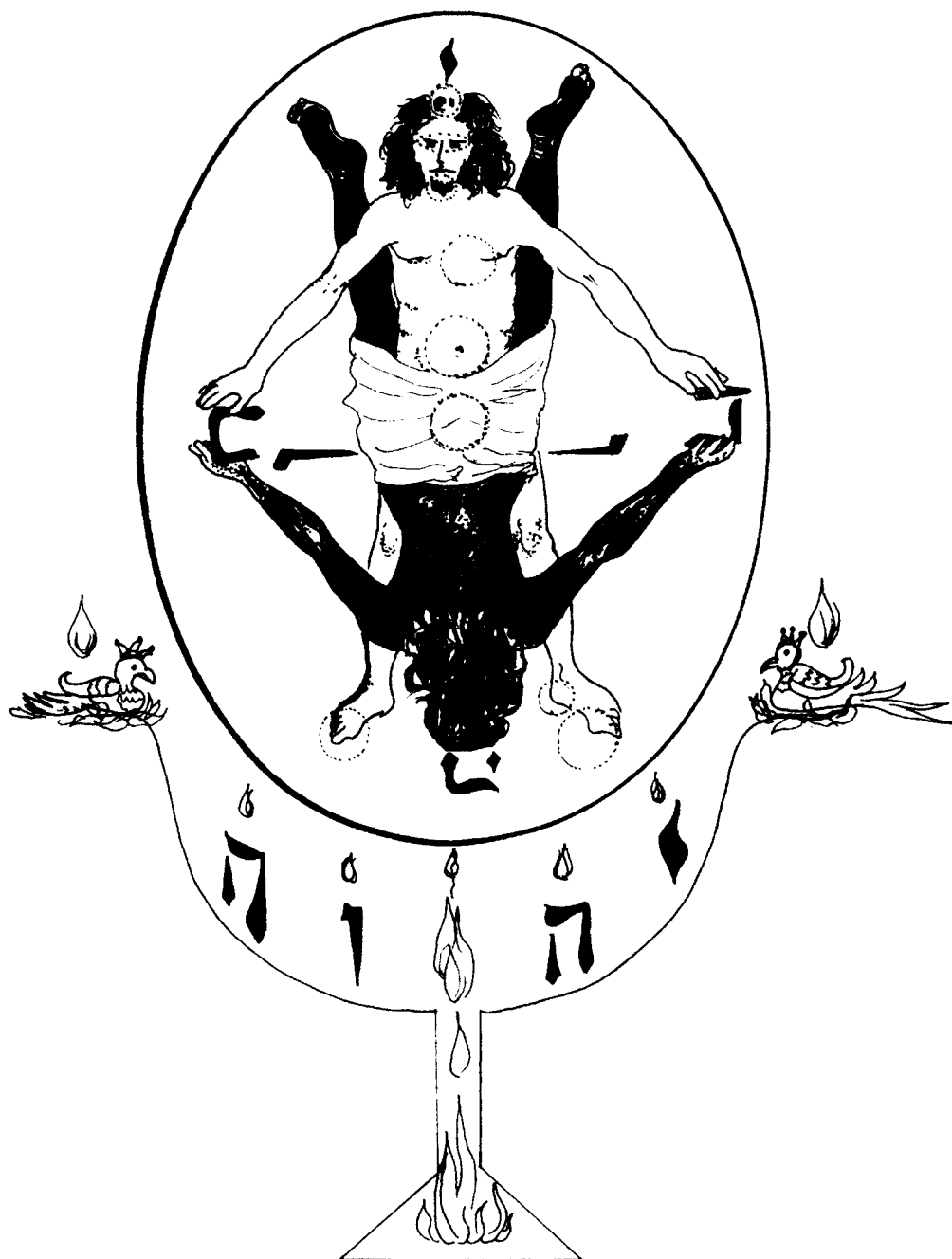


Zohar

Zohar

The Magnum Opus of Spanish-Jewish Kabbalah, which was compiled mostly in the thirteenth century by Moses de León.

It is a dense thicket of symbolism in Aramaic prose, but it breaks the rules of grammar and invents words. Much of it stems from literary sources in the Babylonian Talmud and the targums, so Moses was working with



The Kabbalistic symbol of the *Zohar*, contained within the alchemical egg and menorah (candlestick, representing the divine light).



an already established system of sephiroth or correspondences.

The word *Zohar* means 'splendour, radiance, brightness, enlightenment', and it comes from the root Z-H-R, 'mystical perception'. Moses produced the main body of the *Zohar* although he insisted that this rambling mystical commentary on the Torah was by Rabbi Shimon ben Yochai, the cave-dwelling sage of the second century, who wandered over Galilee exchanging Kabbalistic insights. The *Zohar* refashions the Torah's narrative into a mystical novel. On one level, the biblical heroes are the protagonists, and the rabbis interpret their words, their personalities and their encounters with holy or demonic forces. But at times the commentators become the main characters: Rabbi Shimon has a dramatic study-session, the rabbis have adventures.

In the standard printed editions, the *Zohar* has one volume on *Genesis*, one volume on *Exodus* and one on the three remaining books of the Torah: Leviticus, Numbers, and Deuteronomy (although there are only a few *Zohar* passages on Deuteronomy).

The *Zohar* circulated in manuscript portions distributed by Moses; there is no complete copy. Not everyone, even then, accepted the *Zohar* as an ancient work. Moses claimed that, after Yochai's death, the book was hidden away or secretly handed down from master to disciple. Only recently had it been sent from Israel to Catalonia where it fell into the hands of Moses.

There is a diary recorded by one Isaac ben Schmu'el, who escaped from Israel when Acre fell to the Mamluk Turks. He managed to get to Spain and track down Moses de León in Valladolid. Isaac had heard amazing tales about Moses' discovery of the precious *Zohar* – which had supposedly been written in Israel. Now Isaac was from Israel, but he had never heard of the *Zohar*. When challenged, Moses assured Isaac that he would show him the original manuscript at Avila, where he now lived, if Isaac would care to visit him there

shortly. However, on his way home, Moses became ill at Arevalo and died. Isaac states in his diary that he repaired straight to Avila to learn the truth about the book. He was aghast to learn that Moses' widow had been pounced upon by the tax collector's wife: 'If you give me the ancient manuscript, you can have my son for your daughter to marry!' 'But,' says the widow, 'Moses wrote it out of his head! There is no ancient manuscript!'

Christian interest in the *Zohar* reached fever-pitch at the end of the fifteenth century. Pico and Reuchlin took up the study of Kabbalah through their Jewish teachers. They were convinced that it contained the original divine revelation and accorded it parallels with the Trinity, the Incarnation, the Virgin Mother, the Name of Jesus and Original Sin. The Franciscan Francesco Giorgi of Venice used manuscript material from the *Zohar*, but it was not until 1639 that the first critical work on the *Zohar*, *Ari Nohem* (Roaring Lion) by the Italian scholar Rabbi Leone Modena, announced that the *Zohar* was no more than 350 years old. However, the work was too highly venerated to be openly challenged; it circulated in manuscript only, and was not printed until 1840.

il Zoppo

The cripple, i.e. Edward Kelley, who may well have met his end escaping from Rudolph's castle because he was a cripple and not because he 'was slayne' (as Dee asserts he was in 1595). Certain it is that Sir K, knighted, lamed, earless or otherwise, was hobbling round Most Castle at least until 22 May 1597. See also Rudolph II.

Zoroaster (c. 628 – c. 551Ac)

A cult hero. Pliny, writing at length on healing magic, claims that it was founded in Persia by Zoroaster. Magic, says Pliny, unites the three arts exerting the greatest influence on human thought: medicine, religion and divination.



Zosimos

Pliny relates how one of the librarians at Alexandria, Hermippus, wrote a work entitled *About the Magi* and catalogued Zoroaster's works, amounting to two million lines! By the time it reached Alexandria, the cult of Zoroaster was already imbued with Chaldean elements.

Zoroaster reformed the ancient Persian religion, Masdaism, of its crudest features (throwing little babies into the fire of sacrifice and such like) and streamlined it into offering a system of rewards for the upright life. The essence of this became the state religion under the Sasanian kings of Persia, and was preserved by the 'Magi', the powerful priesthood. When the Arabs conquered Damascus and the Sasanian part of Persia, they Islamized the civil institutions and alchemized the Zoroastrian religion. This was amalgamated into the alchemical texts from Alexandria and Syria to create an oracular mystery-muddle for the Latins to inherit. Zoroaster inspired the Renaissance along with Hermes Trismegistus, Orpheus, Pythagoras and other primeval priests.

In fact, Zoroaster was venerated among the likes of Pico and Dee as being even more ancient than the Egyptian Thoth/Hermes. Dee had copies of works by 'Zoroaster', while Pico was moved in his *Oration on the Dignity of Man* to hail Zoroaster's magic as the 'Science of the Divine'. Several works on Zoroaster appeared towards the end of the sixteenth century. In 1593 Zoroaster bifurcated into Jessenius's *Zoroaster* (Wittenberg) and Patricius's *Philosophical Magic of Zoroaster, with 320 of his Chaldean Oracles*. Both of these rival works by sycophants of Rudolph II reflected a Zoroaster far removed from his Persian prototype. Perhaps what most appealed to alchemists about Zoroaster was his link with the 'cave' imagery. Popularized Plato had his cave of ideas, Bruno had his shadows and De Caus had his grottoes. Zoroaster, through the Neoplatonic vision of Porphyry, is initiated in a cave, and so are his followers. The cave is an image of the world, and it is where prime

matter is mined, over which play the Chymic Choir.

In later times a few stray books appeared in Zoroaster's honour: *Télescope de Zoroastre* (or Key to the Grand Divinatory Cabala of the Magi, 1796) and the *Chaldean Oracles of Zoroaster* edited by Wynn Westcott in 1895.

Zosimos (c. AD300)

Known as the Panopolite, Zosimos was a fourth-century Theban working in Alexandria; the greatest of Gnostic alchemists. His works are full of extraordinary biographical detail, moving from chemical praxis to visions of the gods. Zosimos is said to have founded the chief Greek school of alchemy.

It is in his writings that the word 'alchemy' first appeared. It developed from the practices of jewellers and Egyptian workmen who experimented with various alloys. The word was associated not only with the black Nile mud, *prima materia*, but also with the black dust derived from certain mixtures of mercury – thought to possess marvellous properties – and other substances. It was mystically identified with the body of Osiris and considered the source of life and power.

Zosimos was reputed to have invented an *Encyclopedia of Alchemy* in 28 Books, containing some original material and much that was gleaned from earlier lost texts. A passion for authority led Zosimos to the wildest ascriptions of alchemical works to Hermes, Plato, Moses, Miriam, Cleopatra and Isis. Legends were given alchemical interpretations: Jason's Golden Fleece was said to be an alchemical manuscript on 'parchment' and the Song of Solomon an alchemical treatise on gold-making. Chemical facts were introduced as a kind of seasoning to pure imagination. Zosimos, for instance, had a dream that his head was skinned and his bones mixed with flesh and burned, and this he interpreted as the transformation of his body into spirit. His Gnostic training led him to write in antithetical riddles: 'In speaking of the Philosopher's Stone,



receive this stone which is not a stone, a precious thing which has no value, a thing of many shapes which has no shapes, this unknown which is known of all.'

Few women adepts are referred to in the very male province of alchemy, but Zosimos addresses a woman disciple, Theosebeia, in his *Final Summary* on the Sacerdotal Art of Alchemy. He warns her against the devices of pagan priests who will lure her along the 'supernatural way' of sacrificial offerings. There is a right way of obtaining tinctures: the disciple should, in a quiet and sober fashion, seek God who is present in all things, and she should make sacrifices according to the recommendations of King Solomon. She will thus obtain the authentic tone, the natural tincture from pure ingredients: Attic ochre, native sulphur, Phrygian stone, cinnabar *et al.*

After much meditation on the Divine Pimander, she will attain enlightenment.

Zuccari

Putrified alum (via an intricate process in a pelican) or 'sweet water, an excellent arcanum for extinguishing the microscopic fire in men of a metallic temperament' as Paracelsus put it.

Zwinger, Theodore (sixteenth century)

A Professor of Medicine at Basel and Paracelsan alchemist. According to Burton, he wrote most pertinent passages on antimony being 'like Scanderbeg's sword, which is either good or bad, strong or weak, as the party is that prescribes or useth it'.



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Mrs Bagnall

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Picture by Barbara Nicholls

Diana Fernando's interest in Alchemy started in her childhood in the Welsh Marches and the Wye Valley, among the menhirs and standing stones. Study of Chaucer and Shakespeare at school then inspired her to research the occult background of the Renaissance. Long years of training in esoteric study followed, when she met twentieth-century philosophers and practising alchemists around the world, often visiting them in their homelands.

Taking a year off from teaching, she obtained a degree in traditional typographical design and printing.

For anyone wishing to embark on the path of Alchemy, Diana advises humility, diligence, wonder and – above all – a strong sense of humour.

Back cover image: Alchemical Cosmology, ascribed to Norton. (Diana Fernando)

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